

HaRakevet

הרכבת

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123:01



Through the mountains on the Iranian State Railways. Photo taken during a 'Far Rails' raitour of Iran in early 2018. (Photo by Sieger de Boer).

EDITORIAL.

Was it really open or wasn't it? The long-awaited opening of what is still referred to as the 'AI Line' (which refers originally to the choice of several draft route planning options) went off at half-cock, as many had warned – an opening date rushed for political reasons at a time when the electrification work had not yet been completed on the second track, the signalling and power supply had not been bedded in, training not completed, the line from the airport into Tel Aviv not yet electrified, the spur to Modi'in incomplete, the additional new rolling stock not yet available, no local access to maintenance facilities for the new traction as it was brought into service – many journalists have poured scorn on the number of failures and delays in the first few weeks of running but this is not the fault of those IR staff who struggled to get on with the job even after someone had insisted that trains be run with the public on board, before they were ready. The 'reverse ferret' of declaring these to be still 'passenger-carrying test trains' and, initially at least, providing both the incentive of free travel from Jerusalem coupled with the disincentive of complex pre-booking procedures added to the chaotic feel. BUT – when all is said and done, a massive new project has been completed and provides a step-change in IR services with electric locos hauling or propelling the double-deck sets over viaducts and through tunnels the like of which have never before been seen on this system. We are convinced that within a year these teething problems will have been forgotten and the new line will have become, literally, a part of the national landscape. No doubt in future months we will be able to report on the Modi'in curve, further arguments about a tunnelled extension to the Old City, various stages of energising the lines through Tel Aviv, and more besides.

As we go to press information comes in – but will be held over till next issue – of the next mega-project, the Modi'in – Ramle line which will be built OVER the Road 431. The closing of the missing link between Ra'anana and Herzliyya is still awaited and although things in the Negev seem to have gone quiet we are sure there will be much to report from there in the future. The Hizbollah tunnels from Lebanon and the Hamas tunnels from the Gaza Strip do not seem intended for peaceful railway traffic so will be ignored.

Elsewhere – We are unable (yet) to attend Middle East Railway Conferences in certain countries but it is certain that much building and rebuilding work is under way in several states- Turkey, Iran, UAE, Saudi Arabia and not to forget Syria and maybe even Lebanon and – wonder of wonders – there are talks of extending lines from Israel into neighbouring countries and on to the Persian Gulf. Is this but a messianic vision? Time will tell. But it makes the times even more interesting.

Lines have of course been built and closed in the past and we include as a bonus a Supplement on the remains of the former HR branch from Deraa to Haifa via the Yarmuk Valley.

So here is the next issue, completing Series 32 - a new subscription form will be required for renewals, many of our subscribers now prefer the .pdf version which saves printing and postage but IS reliant on Steve having the correct e-mail address.

Enjoy!

The Editor.

- *Works in progress on the Modi'in curve; the rail link between Modi'in Outskirts and the AI, mainly on bridge. (Photo taken on 03.10.2018 by Aharon Gazit from highway 451.)*



NEWS FROM THE LINE.

[Note: With each issue we face the ongoing question of how to sequence the various reports and themes – some involve major or ongoing projects, some smaller or single incidents. In the end we have to consider that each item is important and so the sequence reflects mostly the chronological order of reporting rather than any prioritisation. The Editor]

(i). LEVEL CROSSING STUPIDITIES:

Israel Railways Ltd. reported on their website that on Thursday 04.10.2018 there were three cases of road vehicles breaking onto level crossings; The first was at Haifa near Bat-Galim station involving a garbage truck belonging to the municipality; the other two occurred at the same level crossing at Lod station; one by a truck driver, the other by a private car driver, both at red lights. Thanks to the alertness of the watchmen there were no casualties, but there were disruptions to train traffic.



A further incident took place at Shefayim on 01.11.2018. IR reported: "A car driver who was probably busy looking at his cellular phone ignored the red flashing lights at the level crossing near Shefayim station (north of Herzliya) and was caught between the barriers. A level crossing inspector

- *Level crossing incident at Shefayim 01.11.2018; the car is halted and reverses - just in time! (Photo by IR)*



reported immediately to the central Control, who instructed the driver of an approaching train to slow down.

A signalling technician working at the site released the arm so the car driver could reverse, thus not being hit by the train which passed only seconds later; a disaster was definitely avoided. The incident caused some delays for a short while."

(It is worth noting that the crossing actually only has Half-Barriers and so theoretically the driver could have accelerated forwards and so escaped, but this presumes a level of intelligence that would not match the majority of Israel drivers. Ed.)

Later on 20th. November Aharon reported: "A disaster could have happened, but luckily it did not happen: a truck driver broke through a level crossing near Ramla ignoring the barriers starting down and the red flashing lights, but became stuck when the arm hit the truck.

The railways' teams evacuated the driver and removed the truck but it caused severe disruptions particularly between Beit-Shemesh, Ramla, Tel-Aviv and Netanya. Traffic resumed gradually. The railways authorities have said that so far during 2018, 4,000 minutes were lost due to such cases as well as other law violations and those committing suicide. *(See photos below)*



If this was not enough, then at around 15:00 handicapped citizens in their wheelchairs demonstrated at a level crossing near Shefayim (north of Herzliyya) as part of their struggle to improve their conditions, blocking train traffic entirely. It took the police three hours to take them away and the railways' authorities have appealed to



court claiming that, despite all the sympathy they have, thousands of passengers being delayed at the most critical hours cannot justify such an action."

(ii). SHEKET!

Israel Railways Ltd. have recently introduced on all the double-deck trains - excluding those running on the A1 - the so called "Silent Car", in which passengers are not to speak loud either between or when using the cellular phones. The aim is to create a pleasant and quiet journey experience for the passengers; the car will have up to 120 seats. Cars have been marked and signed both internally and externally, and stewardesses will explain passengers about the car.

(iii). PEDESTRIAN CASUALTIES.

On 09.10.2018 Aharon wrote: During the last three days, there were three different cases of pedestrians breaking onto the tracks; at least two of them were killed and the other heavily injured by passing trains; this caused repeated delays to passenger traffic.

The police is now investigating whether these cases were coincidental, simple suicides, or terror suicides deliberately intended to cause chaos in rail traffic.

(iv). SUICIDE AT BEIT YEHOSHUA.

On 26.11.2018 the security cameras at Beit-Yehoshua station caught at about 11:00 a person who committed suicide by throwing himself from the platform at a train passing at full speed; he was killed and his body thrown along the platform by the train, hitting several waiting passengers and injuring them. For more than an hour, the station and line were closed; at about 12:25 the police approved reopening of one track while at 13:00 the line was fully re-opened and traffic resumed. The train driver is suffering from post-incident trauma.

(v). AND WATER FLOWED FROM THE ROCK.....

As if this was not enough (in addition to car drivers running into level crossings at red lights in the previous week), then on the morning of 09.10 at about 08:00 there was a huge outburst of water from a main water pipe at one of the settlements adjacent to the A1 line just before Anava junction west of Modi'in, causing closure of the line for some time; the railways organized alternative bus services but after about 40 minutes traffic resumed.

(vi). OVERCROWDING AND CONSEQUENCES.

Aharon wrote 11.10.2018: "Recently there have been many complaints in the media that due to shortage of rolling stock for the A1 line, the railways have reduced the services on the line between Haifa and Nahariyya in order to have more rolling stock available on the A1; this has created overcrowding on trains to/from Nahariyya."

On 15.10.2018 IR announced on their website that because of complaints about overcrowding trains on the line to/from Nahariyya, due to allocating more rolling stock to the A1, it had been decided to strengthen temporarily the stock available for Tel-Aviv -

Nahariyya services by changing maintenance schedules so that part of the work will be performed overnight.

Additionally - after being approved by the Transport Ministry - the service on certain Valley Line trains would be shortened in favour of providing more rolling stock for the Nahariyya line.

Therefore from 16.10.2018 two additional trains would operate on the main line:

At 06:25 and 07:25 from Nahariyya to Tel-Aviv, calling at Akko, Kityat Motzkin, Merkazit HaMifratz, all Haifa stations, all Tel-Aviv stations, terminating at Tel-Aviv HaHagana.

At 16:06 and 17:06 from Tel-Aviv HaHagana to Nahariyya, calling at all Tel-Aviv stations, all Haifa stations, Merkazit HaMifratz, Kityat Motzkin, Akko, terminating at Nahariyya.

On the Valley Line trains departing from Beit-She'an at 06:02 and 07:02 would terminate at Haifa Central rather than Atlit. In the evening the trains of 16:22 and 18:22 would depart from Haifa Central rather than from Atlit. No changes to other trains on the Valley Line.

SOME RELIEF – two weeks later, from 23.11.2018:

After the railways introduced to service some of the recently-received double-deck rolling stock from Bombardier, the following improvements were to commence from Sunday, 25.11.2018:

The train from Ashkelon at 20:06 will extend to Nahariyya instead at Tel-Aviv Savidor/Central, calling also at all Tel-Aviv stations, Herzliyya, Netanya, Hadera West, Binyamina, all Haifa stations, Merkazit HaMifratz, Hutzot HaMifratz, Kiryat-Hayim, Kiryat-Motzkin and Akko.

The 06:58 from Ashkelon to Ra'anana West will depart instead from Netivot at 06:36 calling also at Sderot and Ashkelon.

The 18:14 to Ashkelon will be extended instead at Netivot.

The 21:28 from Tel-Aviv Savidor/Central will be extended to Nahariyya instead of Haifa Central the 8, calling also at Merkazit HaMifratz, Hutzot HaMifratz, Kiryat-Hayim, Kiryat-Motzkin and Akko.



• *Bombardier coaches being unloaded at Haifa*



(vii). STUDENT TRAVELLERS.

From a press release of 14.10.2018 by Israel Railways Ltd.:

Under the slogan "Travelling towards the Degree Title" the railways have given the following data:

During the years 2016-2018 about 13.183M students passed through the network's stations in more than 6.5M journeys.

The students used special arrangements such as a 12-journeys ticket which gives a 33% fare reduction and an expanded ticket valid both for trains and buses which gives a 50% fare reduction.

Between October 2016 and September 2017 (the academic year) 6.451 Million students passed through the stations in 3.226M journeys, while between October 2017 and September 2018 6.732M students passed through the stations in 3,366M journeys; an increase of 4.3%.

The rise in using rail by Students as per Stations was as follows:

Tel-Aviv University station was the most used one during 2016-2017 by 856,095 students; 947,257 used it during 2017-2018 - up by 10%.

Beer-Sheva North/University station was used during 2016-2017 by 415,246 students while 438,085 used it during 2017-2018; up by 5.5%.

Haifa Hof HaCarmel station, which is the nearest one to the Haifa University, was an exception; from 339,007 students during 2016-2017 it went down to 294,786 during 2017-2018; down by 15%!

The station of Rehovot, which is near the Weizmann Institute of Science, was used by 303,827 during 2016-2017, while 339,594 used it during 2017-2018; up by 12%.

The station of Herzliyya, which is the nearest to the Interdisciplinary Centre in that city, was used by 128,297 during 2016-2017, while 135,350 used it during 2017-2018; up by 5%.

The station of Rishon LeZion Moshe Dayan (West) which is near the city's Academic Centre - the College for Management & Administration, was used by 85,974 during 2016-2017, while 105,023 used it during 2017-2018; up by 22%!

The station of Sderot (on the Ashkelon - Beer-Sheva line) which is near the Sapir College, was used by 50,940 students during 2016-2017, while 92,088 used it during 2017-2018; up by 80%!

The Cities providing the highest number of students between 2016 & 2018 are:

Tel-Aviv: 695,078 boarded trains at Tel-Aviv Savidor/Central station and 527,798 boarded at Tel-Aviv HaShalom station.

At Netanya 154,084 boarded trains, at Ashdod Ad-Halom 147,000, at Binyamina 133,122 at Hadera West 100,000, at Beer-Sheva Central 104,000 and at Akko (Acre) 94,000.

During the present academic year – 2017-2018 – which opened on 01.10.2018, thousands of students at the Open University as well as other academic institutes can benefit from the two new stations of Ra'anana South & West, while the students of Achava College north of Kiryat-Gat have the recently-opened Kiryat-Malachi-Yoav station. The station of Mazkeret-Batya (south of Ramla) to be opened within several months will definitely add students, as will be the case when the AI line becomes fully operational.

The railways management responded: "We're pleased to see the increased number of students using rail frequently, thus saving time and money; we wish them a fruitful and pleasant academic year.

(viii). JAMMED BRAKE INCIDENT.

On 18.10.2018 Aharon wrote:

"On 17.10.2018 suburban train No. 236 between Rehovot and Binyamina which left Netanya station at 10:08 had to be brought to a standstill just two minutes later at 10:10 just north of the station, due to a jammed brake on one of the cars

which also created smoke. In accordance with safety regulations the passengers had to be alighted to open ground away from the track area accompanied by the team. One of the passengers had broken a window.

After the train had been thoroughly checked all the passengers were asked to return to the train, though five decided to continue to destinations on foot away from the track. →→

A railway patrol checked the track to make sure it was clear of any pedestrians, following which traffic resumed; at about 11:00 the train entered Hadera West station - a delay of 40 minutes - and passengers were transferred to alternative trains.

(ix). TRIALS AND TRIBULATIONS ON THE A1 LINE.

(a). The 15.10.2018 was a bad day on the A1: At 17:59 a train from Ben-Gurion Airport to Jerusalem Navon became stranded in tunnel No. 3 due to a locomotive pantograph failure; there were 150 passengers on the train and a rescue locomotive which was at standby was sent to pull the train out of the tunnel back to Ben-Gurion airport. The passengers were informed in detail about the failure and received bottles of water.

But on the way to Ben-Gurion airport there was another delay due to electrification works which caused the tracks to be occupied; it was not until 19:50 that the train finally entered Ben-Gurion Airport station. Those who wished then boarded a special train which departed from the Airport station at 20:01 and arrived at Navon Jerusalem at 20:26.

(b). Much criticism in recent months is directed to the A1 line with continuing failures; Passengers who were on the train stuck in tunnel 3 complained that the railway authorities were too slow in their response; it took half an hour for them to open the windows despite the heat inside the cars, adding that there was no pollution in the tunnel (electric train) to justify such a long delay; many said that they will use the line only after it has been fully electrified and is fully operational.

The railways' spokesman explained to the media: "The line is a success; it is a mega project; failures do exist also on much bigger and established railways; it is still in a stage of test running." The Transport Ministry supported IR and said the same.

However, a member of the Opposition called for the Knesset (parliament) Commission for Economy to hold a special session regarding the failures; as an opposition MK he blamed Minister Katz for "Running too fast with the A1 opening - even only for test runs - just to show achievements before the elections which may or may not take place sooner than anticipated."

The sharpest criticism came from the media regarding a photo showing one of the trains on the A1 running on an open section: "The trains on the A1 dislike tunnels - they need fresh air!"

(c). More on the A1 Line Saga:

The Transport Ministry's General Manager Mrs. Keren Terner was interviewed on 18.10.2018 by YNET; here are the main points of her answers (by permission of YNET):

*The A1 is fully safe but is still in the 'test running with passengers' stage.

*It is one of the ministry's most challenging projects, having the longest tunnels, the longest and highest bridges and the deepest railway station (Navon, -80 m).

*The ministry was wrong in its forecast of the passenger traffic growth; nobody could believe that within just two years (2016-2018) it would grow by 36%.



*Regarding the rolling stock shortage and overcrowded trains; the wrong forecast caused this and we're looking even for second-hand rolling stock; additionally, an accident at Ramla (no details) contributed to the shortage.

*Back to the A1: I'm sorry for those passengers who were on the trains stuck in the tunnel; failures do occur even on the best trains, but they will soon disappear.

(d). MORE ON THE A1 LINE:

From 24.10.2018: "Although technical failures - like one with the stranded train yesterday which caused cancellation of the 06:30 trains in both directions between Navon and Ben-Gurion Airport stations - still occur from time to time, there is also good news: the National Fire Fighting Brigades Authority, who checked the safety arrangements on the line, approved them today, stating that the line is safe for operation.

Electrification, however, is progressing slowly; sources say that it may take up to six months to complete between Ben-Gurion Airport and Tel-Aviv HaHagana stations and this may affect other lines to be electrified."

(e). On 29.10.2018 Aharon wrote:

"Although the A1 is still defined as being in test running (as it is actually), the number of failures on an almost daily basis are creating headlines like: "Who is the project's mother? It suffers from childhood diseases".

Yesterday morning, 28.10.2018, there was a fear of smoke in the tunnel near Navon station, which caused cancellation of the 06:30 trains in both directions; after a short while traffic resumed as the warning had been found to be false alarm.

This morning - 29.10.2018 - a failure on an electric locomotive found at 06:54 caused traffic to stop until it was re-set; by 8:00 traffic had not yet resumed."

Maybe Minister Katz is now beginning to regret his demand that the line be opened before it was ready!

(f). This by Tofi Stoler appeared on the 'CLIST' online newsletter on 02.11.2018:

"The Israeli government has accomplished the seemingly impossible, proving it can produce half-baked results, even after 17 years in the oven. Service on the new Jerusalem express train, which only covers half of its originally planned route, was once again interrupted early Tuesday morning with four trains delayed over a one-hour period due to required electricity work on the tracks, which was scheduled to be completed during the night.

The new route is part of an ambitious plan to connect Jerusalem and Tel Aviv through a 28-minute express train. The plan was first approved by the Israeli government in 2001 and originally scheduled for completion by 2008. The partial route, which ends at Ben Gurion International Airport, 19 kilometres southeast of Tel Aviv, began operating in pilot mode late last month, with trains scheduled twice every hour.

On Monday evening the train came to a halt inside a tunnel and had to be towed back to its origin station at Ben Gurion Airport, where passengers waited for service to resume. After beginning their 24-minute journey from the airport at 5:31 p.m. the 150 passengers who were on the train finally arrived in Jerusalem around three hours later. On Sunday three early morning trains were cancelled and service on the route was interrupted again later that morning for another four hours, for maintenance work. Last week service on the route was interrupted following a nearby water pipe explosion, which flooded the tracks.

An emergency meeting of the Israeli parliamentary Economic Affairs Committee concerning the frequent interruptions of service on the route is scheduled to take place early Wednesday morning at the Israeli Parliament in Jerusalem.

The complete 57 kilometre-long route has no official launch date. As of this time, the only train connecting Tel Aviv and Jerusalem runs a 90-minute route first built by the Ottoman Empire in 1892."

(g). And then on 13th. November:

The railways have been instructed by the Transport Ministry that from today there is no further need to register in advance to go by rail between Ben-Gurion Airport and Jerusalem Navon stations; it is now free of registration but remains free of charge during the official testing period.

Furthermore, Multi-Liner smart card holders (only) can now travel free of charge from Navon station over all the railway network.

While it seems at first sight that the railways and the ministry are suddenly generous, the real reason is that trains are almost empty; the journey from/to Tel-Aviv takes almost as long as by bus (due to an average of 10 minutes to reach the platforms at Navon, 22 minutes to Ben-Gurion airport, changing train another 12 minutes and another 10 minutes at least to Tel-Aviv HaHagana and at least another 10 minutes to Savidor/Central station, which totals 64 minutes) during the day and excluding the rush hours. If we bear in mind the failures from time to time which cause service stoppages, then it becomes unattractive.

Even this morning at around 08:30 a failure on one of the Bombardier TRAXX locomotives caused a service frequency change from 2 to 1 train/hour until 11:10.

(h). The Transport Ministry announced on 26.11.2018 that on Wednesday 28.11.2018 a special train would take Transport Minister Mr. Israel Katz and the new recently-elected Jerusalem Mayor Mr. Moshe Leon from Jerusalem Navon station to Ben-Gurion Airport station and back together with many other VIP's.

While the official explanation for this special journey is the good will to respect the new mayor, rumors say that Prime Minister Mr. Netanyahu has "stolen the show from Minister Katz" with the recent political developments (like the resignation of Security & Defense Minister Mr. Avigdor Lieberman) are the main reason; another reason is that Mr. Katz is perhaps the candidate for the job of Minister for Foreign Affairs now done by Mr. Netanyahu - who is also currently-the Security & Defence Minister in actual fact; too much for a Prime Minister, so Mr. Katz wants to end his current job with celebrations!"

Then: From a press release of 28.11.2018 by the Transport & Roads' Safety Ministry:

"Transport Minister Mr. Israel Katz and the newly-elected Mayor of Jerusalem Mr. Moshe Leon travelled this morning, 28.11.2018, on the electric train between Jerusalem Navon and Ben-Gurion



• Train 739 from Ben-Gurion airport to Jerusalem Navon station on the same section, this one headed by a Bombardier TRAXX locomotive.

Airport stations together with hundreds of daily passengers; during the test runs with passengers, which started two months ago and still run, 275,000 passengers have been carried.

During the visit Minister Katz showed Mayor Leon the AI mentioning that the opening of the line for public test runs was done only after all safety arrangements had been approved and without any compromises. He added: "We've been progressing on the AI while operating trains on the available sections as we did with the Jerusalem LRV, where free travel was provided during the first six months of operation due to limited services; on the AI free travel is also provided, though for three months only."

He also said: "I see Mayor Leon as the city's representative and a main factor in linking the Jerusalem public with rail; one of the main aims was to strengthen Jerusalem and link it more strongly with other parts of Israel; in future the line will reach the Western Wall in the Old City through an underground railway line with an additional underground station at the site."

Mayor Leon said: "The AI is one of the most beautiful projects done in Jerusalem; it has been wise to open it in stages as has been done in many other projects; 7,000 daily passengers help to reduce roads' congestion."

The AI will be connected next week to an additional transformer station built near Lod in addition to the existing one at Sha'ar HaGay (east of Latrun monastery); This will enable trains to run over longer sections."

(i). Meanwhile there are many fewer failures on the



• Train 161, 12:19 from Ben-Gurion airport to Modi'in on the bridge over toll highway 6 (not seen) headed by an older Alstom diesel locomotive.

electrified section of the AI and now anybody wishing to board the trains at Ben-Gurion Airport and/or Jerusalem Navon stations can do it free of charge by using the multi-liner smart card without the need to be registered; from Jerusalem Navon station trips are free of charge to the entire network.

(x). ELECTION DAY SPECIAL TIMETABLE.

The railways announced on their website that on 30.10.2018 – when there were elections to the municipalities and local authorities - trains would operate according to a special timetable; the reason being that for the first time ever this had been declared a National Holiday; it had been claimed that people who needed to work do not vote, but now they would.

Here the arrangements:

- On the Carmiel-Beer-Sheva line: one train/hour to call at Ahihud, Kiryat-Motzkin, Merkazit Ha-Mifratz, all Haifa stations, Hadera West, all Tel-Aviv stations, Lod, Ramla, Kiryat-Malakhi-Yoav, Kiryat-Gat, Lehavim/Rahat and Beer-Sheva stations.

- On the Binyamina - Ashkelon, and Binyamina - Rehovot: one train/hour.

- On the Ra'anana West - Beer-Sheva Central: 2 trains/hour.

- On the Ra'anana West - Rishon LeZion Moshe Dayan: 2 trains at 07:00 and 10:00 and at 15:00 & 19:00.

- The following line to operate as usual:

- Nahariyya - Ben-Gurion Airport and Tel-Aviv HaHagana - Beer-Sheva Central (night lines): one train/hour.

- Nahariyya - Modi'in and Ben-Gurion Airport - Jerusalem Navon: 2 trains/hour.

- Herzliyya - Beit-Shemesh and Beit-Shemesh - Jerusalem Malkha: a train every 2 hours.

Lod - Rishon LeZion Harishonim: one train/hour.

Later on 31.10 Aharon wrote:

"From a press release of 30.10.2018 by Israel Railways Ltd.:

By 17.00 today, 228,763 passengers had used rail either on their way to vote in the local authorities elections holiday, or to other destinations (many went shopping, to picnics, etc.).

This is quite remarkable; the record on the regular Labor Day was around 250,000.

The most used stations were those of Tel-Aviv; HaHagana, HaShalom, Savidor/Central and University were used by 66,000 passengers each; second comes Haifa with 22,000 all together; then Jerusalem Navon was used by 8,000 passengers who utilized most of the seats for which they registered to reach Ben-Gurion airport.

Another fact worth mentioning is that up to 19:00 punctuality was higher than 97% which, although achieved on a reduced timetable due to almost no-one working on that day, is still remarkable!"

(xi). EXTRA FRIDAY SERVICE:

IR announced on their website that a decision has been taken to add a train on Fridays between Tel-Aviv Hahagana and Merkazit HaMifratz of Haifa; departing from Tel-Aviv Hahagana at 13:49 and terminating at 15:10 at Merkazit HaMifratz of Haifa, calling at all Tel-Aviv stations, Binyamina and all Haifa stations. The reason for the decision is to make life easier for security forces and students who have to travel on Fridays, to arrive home faster and safer.

(xii). TRACK WORKS.

We gather here several announcements of service changes due to infrastructure works:

(a). Between Thursday night 04.10.2018 at 00:01 and Friday 05.10.2018 at 18:00 the line section Binyamina - Hadera West was closed due to infrastructure works. Consequently the station of Caesarea - Pardes-Hanna (located between these stations) was closed.

On the Nahariyya - Ben-Gurion Airport night line: trains to/from the north, started/terminated at Binyamina; trains to/from the south, started/terminated at Hadera West.

On the Nahariyya - Beer-Sheva line: trains terminating at Tel-Aviv Savidor/Central; trains to/from the north started/terminated at Binyamina; trains to/from the south started/terminated at Hadera West.

The Ashkelon – Rehovot - Binyamina service started/terminated at Hadera West.

(b). IR announced on their website that between Wednesday night 30.10.2018 and Thursday night 01.11.2018

at 00:01 and until Monday 04.11.2018 at 05:00 the line section between Petakh-Tikva Sgula and Ra'anana West would be closed for service due to track upgrading works. Consequently, on 30.10.2018 the 22.19

train from Beer-Sheva Central terminated at Petakh-Tikva Sgula instead of Ra'anana West.

Between 01.11.2018 and 04.11.2018 all trains to/from Ra'anana West will start/terminate at Petakh-Tikva Sgula. The stations of Ra'anana West, Ra'anana South, Hod HaSharon/Sokolov, Kfar-Sava/Nordau and Rosh-HaAyin North would be closed.

(c). Due to track upgrading works and erection of a pedestrian bridge at Merkazit HaMifratz there would be no service between Nahariyya and south between Sunday 11.11.2018 at 23:10 and Monday

12.11.2018 at 05:10. Regular trains of 22:37 and 23:38 between Ben-Gurion Airport and Nahariyya, as well as night trains on the same line, would terminate at Haifa Central the 8. The train between Haifa Hof HaCarmel and Carmiel would depart instead from Haifa Central the 8 at 23:07.

(d). Due to track upgrading works at Binyamina station there would be no service between Haifa Hof HaCarmel and Hadera West on Saturday night 10.11.2018 between 17:30 and 23:59 on the same day. Trains from the north to terminate at Haifa Hof HaCarmel and from the south at Hadera West stations. In both cases, alternative bus services to be provided free of charge.

(e). Due to track upgrading works, the line section between Dimona and Beer-Sheva University stations would be closed from 00:01 on Friday 07.12.2018 until Tuesday 11.12.2018 at 23:59.

(xiii). FOOTBRIDGE INSTALLATION AT MERKAZ HAMIFRATZ.

From a press release of 12.11.2018 by Israel Railways Ltd.:

"On the night between 11.11.2018 and 12.11.2018 the railways carried out works erecting the overhead pedestrian bridge between Merkazit Hamifratz railway station/transportation centre and

The Valley station; this - when completed at the end of the first half of 2019 - will create a direct



• The new bridge being installed. Photo courtesy of Matan Berkovich, IR press office.

walkway between the two stations, avoiding the current inconvenience of passing through the adjacent mall (unless somebody is interested in shopping...) and the busy bus terminal.

The 50m long and 128-ton bridge is fully weather-proof and air-conditioned, fully accessible for people with limited abilities, and will have at both its end escalators and lifts.

The complex work caused the closure of the line section between Nahariyya and Haifa Central the 8 during this time."

(xiv). CASH ON DEMAND!

On Monday 22.10.2018 an Israeli passenger named David, who lives in Canada, went by train from Ben-Gurion Airport to Hadera West, carrying \$15,000 in a black handbag as a wedding gift for his Israeli relatives. Due to the hot weather he changed his shirt and forgot the bag at Tel-Aviv HaHagana station, where he changed trains.

After a while he realized his loss and went back to HaHagana station, where the station master Mr. Kfir Ofri met him and announced that the bag with the money had been found by two team members Assi Avrahami and Shalev Maimon; he gave it back to the frightened but now happy passenger and also encouraged him to relax.

The railway team is quite well experienced in dealing with lost belongings but every such happy end gives a good feeling. The event was also mentioned in the media.

(xv). MORE DOUBLE DECK COACHES ARRIVE.

In the first days of November three of twelve new Bombardier double-deck cars were unloaded at the port of Haifa; they joined another three which were undergoing installation of seats etc. at the Beer-Sheva depot; the other six cars were to arrive within a few days.

Each car has 144 seats and the twelve cars will thus add 1,728 seats, which will hopefully bring some relief to the phenomena of overcrowded trains on some lines. (Photos above.)

(xvi). FIRE PRECAUTIONS.

On 06.11.2018 the Israeli National Council for Construction and Design instructed the National Fire Fighting Authority to adopt more strict safety requirements regarding fire dangers on the A1; among the instructions are: Building a fire-fighting station at Sha'ar Hagai (east of Latrun monastery) as well as a special landing area for helicopters and additional access roads to the tunnel to enable rapid evacuation.

(xvii). GAZA STRIP TROUBLES:

On 13.11 Aharon wrote: "Due to the continuing clashes along the Gaza Strip, and following Home Front Command instructions, the Negev Line between Ashkelon and Beer-Sheva (through Sderot, Netivot and Ofakim) known also as the Western Line has been closed since yesterday and until further notice; services between Beer-Sheva, Lehavim/Rahat, Kiryat-Gat, Lod and northwards continue regularly as for now in both directions; services between Ra'anana, Hod Hasharon, Kfar-Sava, Rosh-HaAyin North, Petakh-Tikva, Bnei-Brak, Tel-Aviv, Holon, Bat-Yam, Rishon LeZion West, Yavne West, Ashdod and Ashkelon continue regularly as for now."

Then: "Due to the ceasefire achieved along the Gaza Strip, train traffic between Ashkelon and Beer-Sheva resumed on 15.11.2018; the first train from Beer-Sheva departed at 07:27; the first train from Ashkelon departed at 07:10."

(xviii). SERVICE IMPROVEMENTS TO ASHDOD.

The following improvements will take place between Ra'anana West and Ashkelon from 17.11.2018: train 1614 regularly departing Ashdod Ad-Halom at 07:07 will depart from Ashkelon at 06:58 instead. Train 683 regularly departing Ra'anana West at 18:14 will extend to Ashkelon at 19:52 instead of Ashdod Ad-Halom at 19:41.

(xix). BAD PARKING.

On 15.11.2018 at around midday a car driver who left a business centre near Beer-Sheva Central station, while reversing, hit the fence of the station, broke through it, fell into the drainage ditch and hit the railway signal post causing damage both to the car and the post. The car passengers were slightly injured and treated by the police and first-aid people.

The accident caused blockage of one track out of the two for a while, causing delays for other trains.

(picture provided by Mr. Matan Berkovich, IR press office.)



• *Bad Parking: Accident at Beer Sheva. (Photo from IR press office.)*

(xx). FUTURE PLANS.

Aharon wrote: "On 19.11.2018 IR held a symposium at the railways' facilities in Haifa for media reporters from the north; I also participated. The railways' General Manager Mr. Shahar Ayalon gave an overview of the railways' projects, daily operational challenges, as well as problems and their solutions.

The most important news was: Works are now commencing on the Modi'in Outskirts - Rishon LeZion Moshe Dayan (West) line which is to run in the median of highway No. 431 (like the case of Ayalon highway 20), then be linked to Rishon LeZion HaRishonim station (though by-passing Beer-Ya'kov station (on the Lod - Rehovot line) as this is not on the road, and run further on to Rishon LeZion Moshe Dayan (West) in the median of highway 431.

Another interesting news item was the plan for a 250 km/h service between Haifa and Tel-Aviv to start at Haifa East near the railway museum, run under the Carmel mountain, exiting at Hof HaCarmel station; the line will have then its own dedicated two

tracks to Tel-Aviv; This will enable a journey of less than 20 minutes between the two cities. Since this is planned for 2040, no simulations, maps, etc. have yet been shown.

Then staff from the MASUA (the central control facilities at Hof HaCarmel station) explained traffic management systems and infrastructures' control facilities.

Afterwards we visited the Haifa East depot, the nearby railway museum, the track machinery depot and finally took a ride on the Plasser EM-120H track inspection car from Haifa East to Haifa Central the 8; those who wanted rode up to Hof Ha Carmel station."

(xxi). LATEST TRAFFIC AND FINANCIAL STATISTICS.

Just before issue 123 was ready for despatch we received the following information:

From a press release of 30.11.2018 by Israel Railways Ltd.:

"Today the railways published their financial report for the 3rd Quarter (Q3) of 2018:

The total income for the 2018 three quarters

were \$164.3M (NIS 608M), slightly less than that of 2017 Q3 - \$164.6M (NIS 609M); Q3 ended with an operational loss of \$11.3M (NIS 42M); there was also a provision of \$56.5M (NIS 209M) due to depreciation; the loss at Q3 of 2018 was only \$3.5M (NIS 13M).

The operational loss for the nine months so far of 2018 was \$14.9M (NIS 55M) caused largely by this provision. There are several reasons for the loss:

Insufficient growth in cargo haulage and continued reduction of the indemnification received from the government in favour of cargo haulage.

The cargo Sector loss reached \$5.95M (NIS 22M) during Q3 as against the company's sectorial loss which reached \$7.84M (NIS 29M).

Insufficient growth of passenger traffic due to allocating more trains onto the A1 service where trains are permitted to carry 400 passengers only, hence reducing the income from incentive subsidies, closing Ben-Gurion Airport and Modi'in stations between Thursday nights and Sunday mornings in favour of electrification works on the A1, including summer vacation and October holidays.

Finally, not all the government's financial commitments have been fulfilled and implemented. The railways have therefore decided to start actions to increase efficiency in order to meet the target of a new annual profit.

Passenger Sector:

*During the first three quarters of 2018 the railways carried 49.2M passengers compared with 47.6M carried during same period 2017, up by 3.4%; the forecast for the whole of 2018 is for 67.2M; the original forecast was for 70M.

*During the 2018 Q3, the railways carried 15.7M passengers compared with 16M carried during 2017 Q3, down by 2%.

*Revenues from the passenger sector during the 2018 Q3 were \$139.45M (NIS 516M), compared with \$137.57M (NIS 509M) during 2017 Q3, up by 1.3%.

*The average daily passenger traffic during the 2018 Q3 was 249,000; on peak days - Sundays and Mondays - it was 256,000.

Cargo Sector:

*During the 2018 Q3, the railways carried 2.1M tons compared with 2.3M tons during 2017 Q3, down by 13%!

*Revenues from the cargo sector during the 2018 Q3 were \$21.6M (NIS 80M) compared with \$23.5M (NIS 87M) during 2017 Q3, down by 8%!

Punctuality :

During the 2018 Q3 average punctuality was 90.7%; from the beginning of 2018 it was 92.2%.

Projects and infrastructures:

During the three quarters of 2018 the railways were progressing on major infrastructure projects such as completing the A1 and introducing electric traction there, albeit on a sectional operation and as test runs with the public; also opening the Sharon line (531) with the two stations of Ra'anana; opening of Kiryat-Malachi/Yoav station; and placing orders for rolling stock and motive power, as well as putting into service those already arrived.

Also to be mentioned are the upgrading works at three of Tel-Aviv's main stations; Savidor/Central, HaShalom and HaHagana (still continuing)."

(xxii). STATION UPGRADINGS AT CAESAREA AND BINYAMINA.

From a press release of 04.12.2018 by Israel Railways Ltd.:

IR continue the development programme and progressing towards the future also by upgrading existing stations; as part of this national programme \$17.3 Million (NIS 64M) works have been performed by the railways' logistic department at the two following stations:

*Caesarea-Pardes Hanna station:

This station exists since 2001; here upgrading works are performed at a cost of \$1.22M (NIS 4.5M) which included 120 sq.m of walls and canopies. This station is one of the most important on the coast line (located between Binyamina and Hadera West) and is used by more than 100,000 passengers each month. Works of upgrading water,

electricity and accessibility continue and are expected to be completed during 2019.

*Binyamina station:

This station, dating from 1920, is one of the busiest, serving 280,000 passengers each month.

Just recently, the parking space was increased by additional 100 places bringing the total to more than 1,000. There will be also an additional exit to the northern parking, as well as a convenience store to be added at the station.



(xxiii). PRIVATE SECTOR FINANCING ENVISAGED.

"Israel said to seek private sector help to limit transportation woes

While government-funded rail systems initially thought cheaper, Jerusalem now looking for outside assistance in bankrolling projects. By Times of Israel staff, 29.11.2018.

Israel is preparing for a massive transportation investment from the private sector in an effort to unclog congested roads throughout the country, as traffic problems have metastasized in light of the government's poorly executed railway projects. Accountant General Rony Hizkiyahu, who oversees government spending, said Wednesday that the infrastructure push could see transportation investments in Israel double to roughly \$16 Billion a year. Among the projects that Israel is seeking private sector funding for are the perennially delayed Tel Aviv light rail and an expansion of the Jerusalem light rail.

While declining to name the specific companies interested in such investments, Hizkiyahu told Reuters that "these are companies that were never before interested in Israel. The moment you create this certainty, they are here."

In the past, the government has financed most of the country's most prominent transportation projects, including the Jerusalem-Tel Aviv fast train, which opened partially last September. But Lior Mentser, head of project finance and infrastructure at the country's biggest bank, Hapoalim, told

Reuters that "it's double the time and money if the government does the project," he said.

Last month, the Knesset Economic Affairs Committee held an emergency debate about persistent problems in the newly inaugurated high-speed train line from Jerusalem to Ben Gurion Airport, after three consecutive days of failures that caused delays and, in one incident, left hundreds of passengers stuck in a tunnel.

Days of glitches and malfunctions brought on public criticism that the line may have been launched before it was fully ready. In addition, due to a lack of

available carriages and electric engines to form the trains, some have been taken away from other routes, in particular the coastal line, which had to reduce its regular service of four trains an hour to just three, leading to overcrowded carriages.

Announcing the planned committee meeting, MK Eitan Cabel of the opposition Zionist Union faction said that the project had turned out to be "one of the biggest failures of recent years."

The train opened at the end of September after years of delays with promises of bringing relief to passengers who previously had to endure a ride between Jerusalem and Tel Aviv that could take as long as two hours each way. But the route from Jerusalem currently goes only as far as Ben Gurion Airport, with the line only expected to be extended to Tel Aviv in several months.

The project was conceived in 2001, at an estimated cost of around NIS 3.5 Billion (\$978M). Works began in 2005, only to be halted by environmentalist opposition until 2009. Tunnelling recommenced in 2012. The final cost has amounted to around NIS 6.5 billion (\$1.8 billion). With the new rail's lack of reliability, commuters have preferred using personal cars, which have caused massive traffic.

The number of vehicles per kilometre of road in Israel is three times the average among 36 OECD countries.

In hopes of more effectively rolling out transportation projects in the future, the government is turning to the private sector for help in bankrolling and directing them. Last month, the government chose the local Shapir engineering firm along with Italy's Impresa (Continued on page 10)



TENDERS.

A.

(i). Israel Railways Ltd. tender No. 2186: Providing services of consulting, planning control and inspection regarding ground foundation and bearing piles: The contract is for 12 months with optional extensions of up to additional 48 months. Latest date for submission of proposals: 08.11.2018.

(ii). Israel Railways Tender No. 21733: Performing works of building, infrastructures, and upgrades by contractors: The building works refer also to: electricity, communication, air condition or ventilation, water, sewage, and firefighting systems. The infrastructure works refer also to: access roads, parking facilities, track nearby works, pipelines of water, gas, sewage, etc. The intention is to select up to 10 winners. The contract is for 24 months with optional extensions of up to additional 36 months. Latest date for submission of proposals: 26.11.2018.

(iii). Israel Railways Ltd. Tender No. 11748: Producing events, organizing and performing conferences, seminars, continuing educational programs, forging team spirit, and hotels for the railways employees, customers, and suppliers: The contract is for 24 months with optional extensions of up to additional 48 months. Latest date for submission of proposals: 05.11.2018.

(iv). Tender No. 21743 for building grade separation No.15 near Ma'ayan Tzvi (on the Tel-Aviv - Haifa line north of Binyamina) and tender No. 21747 for building grade separation No.24 near Avihail (on the Tel-Aviv - Haifa line north of Netanya):

Latest date for submission of proposals for both tenders: 18.11.2018.

(v). Tender No. 21745: Building Grade Separation No. 13 near Habonim cooperative settlement over the Tel-Aviv - Haifa coast line:

The location is at km 26.164 (measured from Haifa East station), and includes an overhead road bridge No. 170, 123 m long. The bridge is to be built considering that the coast line is to be quadrupled on the near future. It replaces a level crossing at which on 11.06.1985 a passenger train coming from Tel-Aviv hit a bus with high school pupils who were on their way to the popular nearby Habonim beach. As a result the bus was thrown aside; 19 pupils, a teacher and an escorting parent were killed and many others wounded.

This disaster shocked Israel and mutual accusations started, eventually reaching the Supreme Court who ordered the railways to improve the level crossing with a better access road and warning signals; until the case there had been only an Andreaskreuz warning sign.

It should be mentioned that the line then was single track and buses crossed the railway only in the summer season. Already in 2006, when the line was already double tracked, it was recommended to build a grade separation, but only now - 12 years after it - and 33 years after the disaster will it be built.

(Continued from page 9) Pizzarotti to invest more than \$260M in a new entry road into Jerusalem.

The news wire also reported that bids for a \$2.7 Bn expansion project of the Jerusalem light rail will be taken early next year, with the Finance Ministry already looking into firms in Canada and Greece. The government's delayed Tel Aviv metro project will enjoy new investments from the private sector as well, with bidding slated to open in the beginning of 2019.

Reuters reported that Israel will now utilize Public Private Partnerships for all transportation projects costing more than NIS 250M (\$67M).

Due to the limited number of local investors available for such expenditures, Deutsche Bank director Ido Gonen told Reuters that the government has turned to banks in Germany, Italy and Japan. "Israel's rail projects certainly have the right attributes and will attract international attention. Tel Aviv definitely will be attractive," Gonen said. But Bank of Israel economist Shay Tsur told Reuters that despite the change in strategy, it is unlikely that the Jewish state will be able to close the gap that has grown over the years with other OECD countries. "Looking forward at the plans for the next 10 to 15 years, it doesn't seem that the scope of investment will manage to close the gap," Tsur said."

A statue was set up as a memorial near the track to commemorate the event.

Time of implementation: 19 months; Latest date for submission of proposals: 29.11.2018.

(vi). Tender No. 21742: Building grade separation No. 20 called Hadera Pardesim (Orchards) over the Tel-Aviv - Haifa line at km 48.380 (measured from Haifa East station), about 4 km north of Hadera West:

The overhead road bridge will be 92m long, since the line is to be in future provided with with 5 tracks. Time of implementation: 18 months. Latest date for submission of proposals: 04.12.2018.

(vii). Tender 41807: For the Manufacture and Supply of Interchangeable Brake Pads for Disc Brakes.

The following tenders mark the beginning of works on the long-awaited rail link between Modi'in Outskirts and Rishon LeZion Moshe Dayan (West) in the median of Highway No. 431:

(viii). Tender No. 21739: Infrastructure, bridges and tunnelling works between km 9.7 and 15.175 in median of highway 431 Latest date for submission of proposals: 04.02.2019.

(ix). Tender No. 21741: Infrastructure and bridges works between km 15.175 and 19.700 in median of highway 431: Latest date for submission of proposals: 07.02.2019.

B. TENDERS AWARDED.

The Railways have announced the following winners of Tenders:

(i). The Eliran Siboni local company won Tender No. 180801 for operating a shop for selling cigarettes, light drinks, gifts etc. at the new Navon station in Jerusalem

(ii) Elbit Systems Ltd. won Tender No. 11719 for providing electronic protection on all the railways stations and sites.

C. ETCS LEVEL 2 ON THE ISRAEL RAILWAYS NETWORK.

I am indebted to Thorsten Bükler for a copy of an article by him and a colleague, Alex Dubov, published in German and English in 'Signal und Draht' magazine, 10/2018 pp.12-14.

Considerable increase in demand has meant that the Ayalon corridor in Tel Aviv is now the most serious bottleneck in the Israeli network. Israel Railways Ltd. have adopted a three-phase approach to overcoming the resulting restrictions. The capacity was raised from ten to fourteen trains per hour and direction in the first step. This article describes the second step leading towards 17 trains, which is based on the network-wide rollout of the ETCS Level 2 and the electrification of the network.

I. Introduction.

Once part of the Ports & Railways Authority, the Israel Railways Corporation Ltd. (ISR) was established as an independent government-owned company in 2003. A comprehensive development strategy quickly bore fruit and has led to rapidly expanding passenger and freight demand over the past 15 years. Israel currently ranks 30th. in the world in terms of annual train trips per capita.

A network of about 1,300 track-km of line is currently under operation.....several sections have come into operation during the last five years, whilst two... sections are currently under construction. The Jerusalem 'A1' link is scheduled to enter preliminary commercial service in autumn 2018, thereby reducing journey times between Tel Aviv and the capital to less than thirty minutes, a third of the current travel time on the upland line. The majority of the relay interlocking systems have been replaced with electronic interlocking systems and the electrification of the network began last year in parallel with the network extensions.

The Israeli network shows strong similarities with the German railway system in terms of its rolling stock and its command/control systems.

The implemented signalling system is closely related to German H/V system.

The automatic train protection is performed using a modified version of INDUSI 260R. ['Induktiv Zug Sicherung'.]

The operational rules for nominal and degraded modes reveal considerable parallels. Nevertheless, there are also some differences to the German situation, which are also of partial relevance for the ETCS rollout:

The safety distances are comparatively short. The routes do not offer a variety of overlaps.

Almost all the lines feature double-track operations in both directions under full signalling coverage.

There is no joining/splitting of trains.

Voice and data communications are provided by Motorola VHF (a private network of ISR) and MIRS (public communication) systems.

2. The Ayalon Corridor is the Core of the Israeli Network.

[A System diagram shows) that almost all the services are directed towards the metropolis of Tel Aviv, which attracts an enormous number of daily commuters. Inside Tel Aviv, the two formerly dead-end stations of Tel Aviv Central (situated close to HaShalom station) and Tel Aviv South (located in the southwest of Tel Aviv) were integrated into a continuous line along the Ayalon River, which is bounded by the lanes of a motorway running alongside, in 1990. Ever since then, most service lines have run through Tel Aviv with the majority of passengers (de-)boarding along the Ayalon corridor.

A diagram provides a schematic overview of the track topology along the Ayalon corridor. While the coastal line (the western / lower tracks) is double-tracked throughout, parts of the eastern line only have one track. The coastal line tracks are operated exclusively one-direction under normal conditions. The eastern track, by contrast, is used bidirectionally for local services which are worked between Hagana and Tel Aviv Merkaz in a zigzag pattern. A maximum speed of 80km/h is permitted along the Ayalon corridor, although these are considerably slower sections, notably due to the switch-system restrictions. Recently, all the platforms along the Ayalon corridor have been extended to their maximum possible length.

The Ayalon corridor reached its capacity limit at the beginning of this decade. Any structural capacity extension is subject to numerous constraints in an urban environment. That is why the ISR has decided to pursue a phased approach to boosting the capacity of the network's core.

I. In the first stage, which was completed in 2015, the line throughput was raised by means of the implementation of 700m block sections and altered operating procedures 14 trains per hour and direction were enabled during peak hours (four hourly trains in a zigzag pattern plus ten hourly trains on the coastal line tracks). The minimum headway times are determined by the occupation of the platform block sections. Their length cannot be reduced any further while obeying the principle that the distant signal announces the aspect of the next main signal....

II. In stage II this limitation should be overcome through the introduction of ETCS Level 2. The system is not only designed to improve safety, but also to allow a further increase in the potential number of paths to 13-14 trains per peak hour and direction. This capacitive benefit of the ETCS is primarily derived from the introduction of shorter block sectioning along platforms. The increase in capacity is mandatory for the operation of a full service scheme on the A1. The completion of the first stage of the phased ETCS rollout will be finished in 2022.

III. In the final stage, the addition of a fourth track along the Ayalon corridor may be considered. This would require either rerouting the river or placing the track at a different height. This measure is closely related to structural changes on the southern network line towards Lod and the northern section up to Herzliya, which will finally enable the segregation of regional and long-distance trains.

After this general introduction to the local situation, the following section highlights the actions taken in order to implement Stage II. It provides an overview into how various activities need to be merged in order to achieve the overall goal.

3. The Paths of Action and the Phases.

Since 2012, ISR have continuously maintained an 'ETCS Masterplan' which sets out the path to follow. The main drivers for its creation at the time were the identified weak points involving capacity and safety.

While designing Stage I of the Ayalon signalling layout, it became evident that the capacity demand according to the mid- and long-term prognoses could not be achieved using conventional signalling. Since major infrastructure amendments are only realisable in the long-term, an intermediate stage II was created on the basis of the ETCS.

In parallel, a train accident at Netanya station in April 2011 boosted an internal analysis of safety drawbacks on the network. Attention was drawn to fact that the combination of short safety distances and I60R supervision principle causes various safety shortcomings. While some of them could be mitigated using 'soft' measures (i.e. adaptations of the I60R monitoring functions and operating rules), the remaining areas either required significant changes to the track layout or the introduction of a more sophisticated automatic train control system with continuous monitoring. Given that the first option was not possible in many places, the adoption of a more efficient train control system was chosen.

The Israeli Ministry of Transport also performed an economic evaluation, which has been outlined by [2]. In parallel with the technical/operational investigation led by ISR. In 2015, the decision was taken to implement the ETCS Level 2 and the budget was granted. It is based on those five pillars, which have been described in the subsequent paragraphs.

3.1 The Replacement of the Interlocking Systems and the Implementation of a second NTC.

After Thales informed ISR of the end-of-life of the relay interlocking systems in 2007, both parties agreed to a 15-year spare part supply. The

replacements of relay interlocking systems with electronic interlocking systems started in 2014 and is planned to be completed in 2023. The ISR signalling system is currently based on the Thales SpDrL72-2 relay interlocking (35% of the interlocking systems) and the Thales L90 electronic interlocking (65% of the interlocking systems) So far, the rollout of the electronic interlocking systems has been managed in such a way so that the replacement has taken place without any disturbance to ongoing traffic. The implementation of the electronic interlocking system is associated with the replacement of track circuits with axle counters. This action is a prerequisite for the network's electrification, as the former track circuits were incompatible with electric operation.

In addition to the upgrade of the interlocking generation, a network management and traffic control centre (NTC) is also being implemented in Lod, near the new headquarters.

3.2 The introduction of GSM-R.

A GSM-R network is mandatory for the operation of ETCS Level 2. As GSM-R is currently not in place for voice or data communication, ISR announced a tender for the design, construction, maintenance and operation of GSM-R network under a 20-year contract at the end of 2016.

In November 2017, a consortium of Nokia and Motorola was chosen to execute the 350 million NIS (84 million Euro) project. The GSM-R network is expected to be completed in 2022. A VHF radio communication system will be retained as a back-up to the GSM-R for voice communication.

3.3. Trackside ETCS Implementation.

In January 2017, ISR announced a tender for trackside equipment with the ETCS Level 2 following the design-build-maintain principle. The value of the contract does not include any adaptations to the interlocking systems, which will be upgraded separately. The system will comply with SRS 2.3.0d in order to reduce any implementational risks. However, this also required finding solutions on how to cope with some of the remaining level crossings.

Of the three pre-qualified bidders, Thales was awarded the contract to execute the project in June 2018. The rollout has been scheduled for three phases:

- Phase I covers the network between Herzliya in the north and Lod, Modi'in and Jerusalem HaUma in the south/east. The introduction of the network core includes two Radion Block Centre (RBC) (one in reserve). Phase I of the ETCS trackside rollout corresponds to Phase II of the overall Ayalon capacity upgrade.

- Phase 2 focuses on the northern portion of the network, i.e. All the lines north of Herzliya plus the eastern Tel Aviv by-pass. It requires the implementation of four RBC.

- Finally, Phase 3 covers the largest share of track, namely all the network south of Lod, including the freight lines to Zefa and Zin. Three additional RBC are necessary to operate this part of the network.

The existing operating rules and processes have been amended since 2015 to include operation with

the ETS as part of the trackside project. No major difficulties in mapping the existing rules have been identified during the preparation for the ETCS operating rules. As some operating procedures are not applied on the Israeli network (for example, joining/splitting) the ETCS operational 'toolbox' does not need to be used to its full extent. The operating principles favour Level STM for the backup operation, wherever possible, because there are no considerations concerning the disassembly of the I6OR equipment after the completion of the full ETCS rollout. Even though there will be no ETCS Level 2 operations in the very near future, they will become partly relevant within the coming months, as TRAXX AC3 locomotives are operated at the STM Level on the existing network.

As yet there are no operational procedures in the Israeli network based on the braked percentage according to UIC leaflet 544-1. The permitted speeds are related to the train types and their worst expected braking behaviour (as for PZB 90). Nevertheless the introduction of ETCS Level 2 will require the establishment of a set of principles on how to determine the braked percentage. This process was triggered in the previous year in order to allow it to be implemented at the same time as the commissioning of the ETCS.

3.4. On-board ETCS Implementation.

The operation of the future service line concepts requires additional rolling stock. For this purpose, the Israeli fleet has significantly grown throughout the past decade (i.e. hundreds of single- and double-decked passenger cars, as well as EURO3200 and EURO4000 locos from Vossloh.) At present, investments in further rolling stock are additionally being driven by electrification. This has also affected the on-board implementation of the ETCS.

In 2015, Bombardier was contracted to deliver at least 62 electric locomotives. The delivery of the first TRAXX AC3 took place in early 2018. The first units may enter commercial operation with the introduction of the preliminary service on the A1 line. The locomotives will be delivered with ETCS Level 2 equipment following SRS 2.3.0d, including a BL 3 braking model. They will also provide an I6OR-STM.

In March 2018 ISR purchased 60 double-decked EMU from Siemens in three tranches. The units, derived from the Desiro HC (related to NRW's 'RRX' – [i.e. Nordrhein-Westfalen - 'Rhein-Ruhr Express']) are due to be delivered with ETCS on-board equipment following SRS 3.4.0, including the ability to operate at the MTC (STM) Level on a non-ETCS network.

A retrofit tender was announced in September 2017 in order to equip the existing fleet with the ETCS. It covers the equipping of about 200 locomotives and steering cabs. It is up to the bidder to provide either an SRS 2.3.0d or SRS 3.4.0 based solution. The supplier will be chosen at the end of 2018.

After the completion of the delivery and retrofitting almost the whole rolling stock fleet will be equipped with the ETCS. As there are going to be at least two different suppliers, operating rules will have to be formulated in a more abstract manner than has so far been the case for the standalone I6OR.

3.5. Integration and Training.

Extensive integration will be mandatory in the area of the supplies involved in supplying radio, trackside and on-board systems. ISR along with consulting engineers will take responsibility for the integration.

As all types of rolling stock are operated on all lines (with small exceptions because of electrification), a profound training scheme will be required. The intensive training is planned to start in early 2019. The preparation of the training materials began in parallel with the expansion of the operating regulations in 2016.

4. Outlook.

Five ETCS-related paths of action will be executed in parallel in order to increase the services along the Ayalon corridor and to implement full operations on the A1. Electrification is simultaneously underway and the company must also deal with an increase in staff, as well as in the numbers of rolling stock. Once all of these challenges have been completed, the impressive transformation of Israel Railways Ltd. will have reached the next level."



(a). TEL-AVIV LRV/METRO PROJECT:

(i). NTA tender No. 037/2018: Providing services of various sorts of translations to a variety of languages, as well as recording and simultaneous transcription for NTA: The services are intended to all NTA projects and required in all contacts with foreign consultants and representatives, as well as on conferences. The intention is to select up to 2 winners. The contract is for 24 months with optional extensions of up to additional 36 months. Latest date for submission of proposals: 25.10.2018.

(ii). Tender No. 234/2018: Providing management services for the eastern section of the Purple Line: General: This 29 km LRV line will link Tel-Aviv with Ramat-Gan, Kiryat-Ono, Givat-Shmuel, the western edge of Petakh-Tikva, Or-Yehuda, and Yahud; it will run on surface along its whole alignment; the spoken eastern section, runs at Ramat-Gan, Kiryat-Ono, and Givat-Shmuel. The intention is to select one winning bidder. The contract is for 24 months. Latest date for submission of proposals: 26.12.2018.

(iii). Tender No. 102/2017: Providing Ortho Photo services and by-products:

The intention is to select one winning bidder. The contract is for 36 months with optional extensions of up to additional 24 months. Latest date for submission of proposals: 16.12.2018.

(b). PETACH TIKVA AREA CONSTRUCTION.

Aharon wrote: "On Tuesday afternoon, 06.11.2018, I took the attached pictures near Petakh-Tikva's so called Big Mall facing Beilinson medical center.

One shows drilling works for NTA control chamber for the LRV Red Line to run at the adjacent Jabotinsky road. An irony of fate; the huge canopies seen were once supposed to be an intercity and regional bus terminal to replace the current outdated Central Bus Station, located in another area. However, due to a conflict between the municipality and the Transport Ministry regarding accessibility and safety, it is stalled and like a "white elephant".

One shows the NTA work site and the "white elephant" on the Jabotinsky Road; the view is westwards towards Tel-Aviv; on the extreme right can be seen partially the so-called Big Mall; the empty road in the middle is the LRV Red Line alignment used some years ago as BRT; however, because of bad safety design and some fatalities it has been closed and will eventually open as a surface LRV alignment.

One shows what should have been an underground pedestrian passage to the BRT; this is where the fatalities occurred; the bus on the left called METRONIT ran on the BRT lane, runs now at Jabotinsky Road and carries No. 1 in red to say it is the forerunner for the LRV of the LRV Red Line.





One is a more general view westwards, while one is a view eastwards towards the center of Petakh-Tikva showing the LRV short under road section."

(c). VIDEO. The following video on YouTube shows work on the Tel Aviv metro construction:

https://www.youtube.com/watch?v=aP_RpWIBO4Y



• An aerial view of works on the former Ottoman Jaffa-Jerusalem line alignment looking towards Jaffa.

B. JERUSALEM.

(i). On 12.10.2018 came an item in 'Times of Israel' by Sue Surkes:

"Israel Prize winners call on government to cancel Jerusalem Old City cable car

70 public figures from academia and the arts sign petition, say holy city is 'not Disneyland and its treasures of landscape and its heritage are not negotiable currency'

"Public pressure to cancel a controversial project for a cable car to Jerusalem's Old City intensified Friday with publication of a petition signed by 70 figures from academia, architecture, archaeology and the arts.

The petition – which includes the names of four Israel Prize recipients — calls on the government to find alternative ways to improve transport to the Old City, the current route to which is congested and polluted by tour buses and private cars. It says, "Jerusalem is not Disneyland and its treasures of landscape and its heritage are not negotiable currency."

On Thursday, the Association of Architects and Town Planners in Israel and the Council for the Preservation of Heritage Sites slammed the plans, which are scheduled to come up for discussion on Sunday by the decision-making council of the Nature and Parks Authority.

As the proposed route for the cable car runs through the national park that envelops the Old City, the council has the power to bury the scheme. Petition signatories include two members of that council — Dr. Uzi Dahari, a former deputy CEO of the Israel Antiquities Authority, who represents the institution on the council, and landscape architect Prof. Nurit Lissovsky from the Technion – Israel Institute of Technology in the northern city of Haifa.

The Israel Prize winners on the list are Yehoshua Ben-Arieh, a researcher of Jerusalem, architect Yaakov Yaar, archaeologist Amihai Mazar and stage artist Hadas Efrat.

Other names include those of Boaz Kedar — a former chair of the Israel Antiquities Authority board, Moshe Margalith — holder of the UNESCO Chair on the Heritage of the Modern Movement at Tel Aviv University, filmmaker Amos Gitai, founder and former president of the Jerusalem Foundation Ruth Cheshin, author and Prime Minister's Prize recipient Eli Amir, and the Canadian-Israeli architect Moshe Safdie.

Safdie wrote a blistering letter opposing the project for a public forum on the cable car plan that was held in Jerusalem last month.

The cable car, an initiative of the Tourism Ministry and the Jerusalem Development Authority — the joint body of the city's municipality and the government — is intended to take visitors from the First Station cultural complex south of the city center to the Old City's Dung Gate in under five minutes.

Planned to start operating in 2021, it is set to pass through, but not stop at, a cable car storage depot in the public garden below Ein Rogel Street in the neighborhood of Abu Tor. From there, it will sail over the Hinnom Valley to a stop at Mount Zion, before continuing over the Palestinian village of Silwan to its final destination — the still-to-be built Kedem Center — a massive, multi-story complex that the right-wing City of David Foundation is planning to build on top of the Givati parking lot, near the Dung Gate. The foundation is best known for the national archaeological park it runs under the City of David in Silwan, where it is also involved in purchasing properties for Jewish families.

The cable car system is being designed to ferry up to 3,000 people per hour in up to 72 ten-person cabins along a line supported by 15 massive pylons. Both the Old City and its walls are UNESCO World Heritage Sites.

Ministers, outgoing Jerusalem Mayor Nir Barkat and at least three of his likely successors in next month's local elections argue that the 1.4-kilometre-long (4,600-foot) track of the cable car — the bulk of which will be located in mainly Palestinian East Jerusalem — will serve as a tourist attraction. More importantly, they say, it is the greenest, least disruptive, and most immediately feasible and affordable solution to getting visitors from West Jerusalem to the traffic-mired Old City and the main entrance to the Western Wall, the most venerated site where Jews are allowed to pray.

But the petition, organized by Emek Shaveh, a left-wing NGO whose goal is to preserve and make ancient sites available to people of all backgrounds and faiths, warns that what it refers to as the “grandiose and dangerous” plan will introduce a “foreign element” into the “historic and sacred” area around the Old City, forever changing the skyline, view and character of the area, harming a place that resounds for people throughout Israel and the world and causing particular damage to the Hinnom Valley — which gave the world the word Gehenna (hell) — which surrounds the Old City from the west and south.

The petition claims that the project will worsen rather than aid public transport in the city, and it attacks the government for advancing the project in a way that it says will deny the public and the professional community from organizing an open debate about the plan and even opposing it.

The cable car project is not going through the regular planning system of local, district, and national planning committees, each of which allow for public objections.

After just one presentation before the Jerusalem planning committee last year — which included presentation of a video — the project was whisked away to the National Planning Council, a fast-track body within the Finance Ministry set up to handle major infrastructure projects such as gas and railway lines that cross local authority boundaries.

That the council — and the tourism ministry, led since 2015 by Likud lawmaker Yariv Levin — was able to take on an ostensibly local project such as this was thanks to a little-noticed 2016 government amendment to the planning law that added “tourist infrastructure” projects to the definition of “national infrastructure” ones, and specifically named tourism transportation systems.

On Thursday the Association of Architects and Town Planners suggested that the cable car project is illegal under planning law, which, it said, does not sanction the building of tourist infrastructure in a national park surrounded by open areas.

Project opponents point to another clause in the government's amendment to the planning law which appears to exclude schemes that, according to the relevant district master plan, are “surrounded on all sides by land zoned as open space.”

According to architects consulted by The Times of Israel, the Jerusalem District Master Plan clearly shows that 90 percent of the area earmarked for the cable car has been zoned as a national park around the Old City walls.

Emek Shaveh has issued its own video clip about the project."

(ii). TRAM BLOCKAGE.

In Times of Israel 2.12.2018 is a photo of several young Haredi Jews sitting on the tram tracks and blocking passage to a car (Ironically the destination blind reads 'Heil HaAvir' which means 'The Air Force'). They were protesting government moves to introduce compulsory conscription also for this sector of the Israeli community.

C. HAIFA.

(i). Steve Sattler wrote on 04.10: "In a few weeks time, the Carmelit train will run again as a public service. The tunnel has been renovated, new electrical and safety features have been installed and an automatic sprinkler system installed. The new carriages have arrived and from next week the staff will be testing the system.

Although the British administration during the Mandate was planning to build this funicular from [downtown] Paris Square to Gan HaEm (Garden of the Mothers) on the Carmel range; it took the Mayor of Haifa in 1955, Abba Hushi, to get the ball rolling. It was built by Sole Boneh [based on French plans] from 1956-1959 and six stations were installed. The train climbs 274 metres from Paris Square to Gan HaEm.

A fire in Feb. 2017 [an electrical fault] destroyed the carriages and caused significant damage. New carriages from Switzerland have now been installed, [48 seats each] and 528 passengers can use each double set of carriages - in each direction.

Until the new Tel Aviv metro starts to function [2023??], the Carmelit will remain the only underground train service in Israel. It is still one of the smallest, and shortest underground railways in the world."

(ii). Re-Opening.

From a press release of 04.10.2018 by the Haifa Municipality Spokesman office:

"Today, after more than a year, the moment that many waited for has come: at 16:30 in a modest ceremony the only Israeli metro in operation - the Carmelit of Haifa - resumed service for the public; during the public test runs through October services will be free.

The new trains and systems built by the Swiss consortium Garaventa-Doppelmayr at a cost of \$27.5 Million (NIS 100M) have a capacity of 264 passengers each including 48 seats, so that with both trains running each towards the other (as a cable drawn funicular) 528 passengers can be carried at the same time.

The train speed is 8 m/sec. or 28 km/h; the 1.8 km line is covered within 10 minutes including stops at intermediate stations; interestingly, the historical trains of 1959 made in France did it in 6 minutes; no explanation was given!

The Carmelit is the first Israeli vehicle of any sort on which an automatic fire fighting system is installed on each of the two cars forming the train; This was the requirement of the Mayor of Haifa Mr. Yona Yahav as a lesson from the fire which entirely burnt one of the former trains and the station at Paris Square downtown.

The trains have successfully undergone intensive smoke-detecting tests supervised by experts from a German safety lab, which included creation of smoke from heated-up alcohol (to prevent creation of soot); This was detected within less than 60 seconds and the ceiling mounted sprinklers were activated creating a Water Mist. The new system is equipped with a fire-fighting system based on splashing water from special spray holes in the car ceiling, which creates a "water mist" inside the car's interior. This is one of the most advanced fire extinguishing systems in the world, considering the speed of its entry into operation once the smoke has been identified in the car. Five smoke detectors are installed in each of the new cars and in order to prevent false alarms, the systems are activated only after the smoke has been detected by at least two detectors. When the smoke is detected, the fire extinguishing system is activated, which fills the space of the car with very high pressure water particles that reduce the volume of fire and the volume of gases emitted during the fire, thereby significantly reducing the danger to passengers' lives. In addition, there is a possibility for the train driver to operate the fire extinguishing system manually, at his discretion.

The passengers can now enjoy upholstered seats, good air conditioning and information screens in three languages - Hebrew, Arabic and English - indicating the route, name of the next station and information of public transport services running at the stations nearby; the same information is given by audio announcements in the cars and at the stations.

The trains run Sunday to Thursday inclusive between 06:00 and midnight; on Friday between 06:00 and 15:00 at 12 minutes' frequency; trains are not running on Friday after 15:00 nor during Saturday; service resumes on Saturday night, about an hour after Shabbat ends, which changes according to the length of daylight .

The mayor of Haifa Mr. Yona Yahav said: "Many people felt the absence of the Carmelit; now they enjoy Israel's most modern, advanced and safest public transport service".

Aharon adds: "I myself travelled yesterday, but this was before the ceremony; The impression regarding the trains was of good quality, although the riding was smooth but stiff and noisy; the Paris Square station is not yet entirely cleaned from the



fire and construction materials are still scattered here and at additional stations; hopefully, works will be completed soon."

Attached here are pictures provided by courtesy of Mr. Gil Meller from the municipality spokesman office; credit for photos both taken at Gan Haem (Mother's Garden) station on mount Carmel-Mr. Reuben Cohen from the municipality spokesman office:

Pictures #1 shows the platform and entrance for passengers running to the downtown, while picture #2 shows the platform and exit for those arriving from the downtown.

Pictures #3 show a train arriving at Gan Haem (Mother's Garden) station as well as interior and driving desk; picture #4 was taken at Paris Square station in the downtown.

• *Photo:s Haifa Municipality Reuven Cohen*

The moment had been expected by hundreds of thousands of Carmelit users. After a long rehabilitation period, which included the purchase of a new and sophisticated railway system and the establishment of an improved infrastructure system, the Carmelit will re-operate.

During the coming month, the Carmelit will undergo a trial period, during which passengers will be able to enjoy the experience of traveling there free of charge. At the end of the run-in period, the passengers will continue to enjoy the use of the multi-line ticket, and the possibility of making a transition from the bus or the matron to and from the Carmelit, at no additional charge within 90 minutes, as is customary in public transportation.

The new train system of the Carmelit, built by the Swiss corporation "Garavonte-Dupelmayer" at a cost estimated at NIS 100 Million, includes two trains, each with a pair of 48 seat cars in addition to standing places, 264 passengers simultaneously - a total of 528 passengers in both trains at the same time.

The Carmelit's speed will be 8 metres per second (28 kilometres per hour) and it will make the entire route - from Paris Square to the mother park and vice versa - in 10 minutes, including stops to pick up and take off passengers at the intermediate stations.

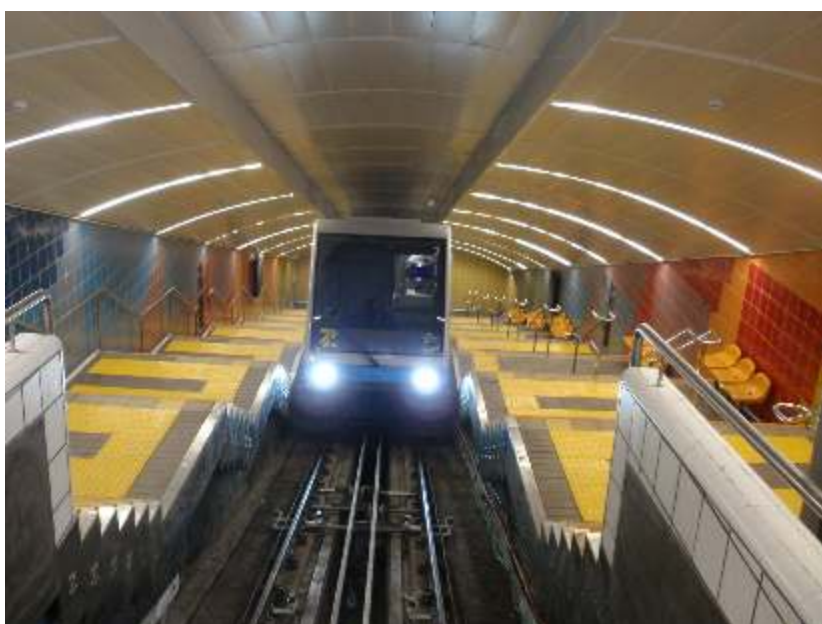
The new Carmelit will be the first transportation vehicle in the country with automatic fire extinguishing system installed in passenger cars.

The passengers of the new Carmelit can enjoy a decorative lighting system, upholstered seats and an innovative air-conditioning system. In addition, the new carriages will include bicycle transport facilities and passenger information screens, which will show the exact location of the train on its route at any given time. The new cars are equipped with a public address system, in which information will be given to travelers in three languages (Hebrew, English and Arabic) before the train reaches the station. The message will include the name of the nearest station and the general direction of the trip.

At the entrance to each station and along the platforms information screens are installed on which information indicating the location of each of the two trains and the estimated time of arrival for each station will be displayed graphically. In this way, passengers waiting at the stations will be able to know when the next train is due and what direction it will take. As in the cars, so on the platforms, a public announcement system will be put in place to announce the expected train to enter the station and the direction of its journey.

Visitors to the Carmelit will be able to use the information screens installed in it to learn the frequency of the bus lines, the "Matronit" or the Coastal Train Station, which are adjacent to the Carmelit stations.

Recently, the new Carmelit cars underwent a series of tests which were designed to test the level of correctness of the detection and extinguishing systems installed in them. The tests were carried out by a German safety laboratory, and included



several experiments that simulated the formation of high-temperature smoke inside the passenger carriages, and the examination of the time it takes to detect the smoke and begin the operation of the fire extinguishing system. The experiments were performed by using an artificial smoke generator, heated with alcohol, which is considered to be a clean combustible substance that leaves no traces of soot. The tests carried out by the laboratory



123:07.

OTHER MIDDLE EAST RAILWAYS.

A. SAUDI ARABIA.

(i). HARAMAIN LINE OPENING.

From: 'R.G.I.' 25.09.2018. "Saudi Arabia became the latest country to launch high-speed services on September 25, when the Haramain High Speed Rail line linking Makkah, Jeddah and Madinah was formally inaugurated by King Salman bin Abdulaziz Al Saud. The ceremony in Jeddah was also attended by the three regional governors and Transport Minister Dr Nabil bin Mohammed Al-Amoudi. (But few Western attendees!)

The formal opening of the line had been timed to coincide with the country's 88th National Day on September 23. Speaking at the inauguration the King, who is Custodian of the Two Holy Mosques, said 'We have put our trust in Allah, and we ask Allah to grant success.' Following the ceremony, he boarded one of the Talgo-built trainsets for a trip to Madinah.

The 453km line with five stations has been developed in line with the country's 2030 national plan. Designed for a maximum speed of 320km/h, it is intended to carry up to 60 million passengers/year to and from the holy cities. 'The



personnel were very successful, after the discovery of smoke in the cars was detected by the detectors in less than 60 seconds, which constitute the European standard for this measure.

According to the instructions of the mayor of Haifa, Yona Yahav, the Carmelit includes an automatic fire-extinguishing system in each of the cars, and not only in the electricity boards, as is customary in other trains. In this way, the new caravan system is equipped with a fire-fighting system, based on splashing water from special spray holes in the car ceiling, which creates a "water mist" inside the car's interior.

This is one of the most advanced fire extinguishing systems in the world, considering the speed of its entry into operation once the smoke has been identified in the car and it was installed in coordination with the Fire and Rescue Authority and in its professional opinion. Five smoke detectors are installed in each of the new cars, and in order to prevent false alarms, the systems are activated only after the smoke has been detected by at least two detectors.

When smoke is detected the fire extinguishing system is activated, which fills the space of the car with very high pressure water particles that reduce the volume of fire and the volume of gases emitted during the fire, thereby significantly reducing the danger to passengers' lives. In addition,

journey between Makkah and Madinah has become closer and easier than ever before', said Al-Amoudi.

Civil works have been undertaken by Chinese and Saudi Arabian contractors, with railway systems supplied by the Spanish-led Al-Shoula consortium under a €6.7bn concession. This included the supply of 36 Talgo 350 trainsets as well as track and electrification; Operations are being managed by RENFE and ADIF for the first 12 years.

Revenue services are due to begin on October 1, following the publication of fares on September 18. Operations are expected to start with a few trains each

day, limited to 200km/h, but would gradually ramp up in both speed and frequency, with a full service of 300km/h trains anticipated by September 2019."

(ii). **EXPANSION.** In the October 'Railway Gazette' - "Expanding the Saudi network.

Saudi Railway Company Chief Executive Officer Dr Bashar Al-Malik outlines the status of major rail projects that include revival of the landbridge and a long-term Master Plan."

(iii). **RIYADH METRO AIRPORT EXTENSION: CONTRACT AWARDED.**

From 'Metro Report Intl.' 18.10.2018: "The FAST Consortium which is building Riyadh Metro Line 4 has been awarded a contract to build a two-station extension to serve King Khalid International Airport. This will include a 1.5km viaduct and two elevated stations with direct access to airport terminals 1/2 and 3/4 via footbridges. The extension will allow Line 4 to provide a direct link between the international airport and King Abdullah Financial District.

The FAST Consortium is led by FCC and includes Alstom, Samsung C&T, Strukton, Freyssinet, Tyspa and Setec."

(iv). **SAUDI RAILWAY CO. AND GREENBRIER ANNOUNCE JOINT VENTURE.**

From 'R.G.I.' 29.10.2018: "The Greenbrier Companies and Saudi Railway Co have signed an agreement to establish a joint venture to invest in the Saudi rail freight market and potentially the wider Gulf Co-operation Council region. The agreement is subject to the completion of final due diligence by the parties and required government and corporate approvals.

Based on achieving 'identified milestones', Greenbrier would supply wagons and freight handling equipment worth up to US\$100m, and would operate freight terminals. SAR would provide locomotives, rail access and haulage services.

Using its investment syndication model, Greenbrier would facilitate the raising of an additional US\$170M in collaboration with SAR and international investors. Greenbrier would have the first right to supply vehicles for the joint venture's wagon pool and to establish a local manufacturing presence.

The US company said SAR would benefit from technology and knowledge transfer, advanced wagon designs and efficient network service design, with the joint venture promoting supply chain efficiencies by increasing local content, reducing the capital burden on SAR, lowering SAR's operating costs and improving competitiveness with road transport.

'The joint venture will benefit the people of Saudi Arabia by enhancing the capacity and efficiency of freight and logistics systems in the kingdom while contributing to local job growth, economic development and national defence mobility,' said Greenbrier Chairman, CEO & President William A. Furman on October 26. 'As the kingdom advances economic diversification to improve the life of its people, it will significantly grow its transportation

infrastructure. We are pleased to partner with SAR as it addresses these needs in its rail network."

SAR AFFILIATES WITH SAFETY AND STANDARDS BODY IN UK.

From 'R.G.I.' 26.11.2018: "Saudi Railway Co has become one of the first international affiliates of the UK's Rail Safety & Standards Board.

Vice-President, Operations, Khaled Al Harbi said being able to access RSSB's tools and guidance would support Saudi Arabia's goal of improving its rail transport resources. 'Together we will be sure to deliver a better, safer railway that not only meets our society's expectations but exceeds them as well', he said.

RSSB Business Development & Engagement Director Paul McLoughlin said the organisation was 'delighted' to welcome SAR. 'We have always worked with colleagues from other countries to share our knowledge and expertise', he said. 'This more formal arrangement will enable both parties to benefit from a closer working relationship and together we will be able to deliver a better, safer railway."

B. EGYPT.

(i) **EGYPTIAN NATIONAL RAILWAYS ORDERS 1300 COACHES.**

From 'R.G.I.' 26.09.2018: "A five-year contract worth more than €1bn covering the supply of 1,300 coaches was signed by Egyptian National Railways and the Transmashholding-Hungary Kft consortium on September 25.

The agreement covers five types of coach:

Third class, with forced ventilation (500);

Third class, with air-conditioning (500);

Second class, with air-conditioning (180);

First class, with air-conditioning (90);

Second class, with air-conditioning and buffet (30).

TMH said companies from China, Italy, India and Romania had also responded to the call for tenders issued in 2017.

TMH's Tver Carriage Works in Russia will manufacture key components, produce half of the total number of vehicles and be in charge of technology transfer.

Hungarian consortium member Dunakeszi Járműjavító will be a manufacturing and financial partner, and will work with TMH to produce the remaining half of the fleet. TMH Engineering will act as design authority.

The project also anticipates the supply of components and sub-assemblies for final fitting out at a local plant which TMH International will develop in partnership with Egypt's National Organisation for Military Production.

TMH said the project was being supported by the governments of Egypt, Hungary and Russia, and 'personally' by President el-Sisi. The Russian company said the parties were 'confident that further improvement of trade and industrial relationships

will make a solid platform for even more ambitious projects in future."

(ii). **THE FORMER ROYAL TRAIN.**

From 'Egypt Today', thanks to Chen Melling (slightly edited):

"CAIRO – 23 April 2018: The Royal Train will be available for touristic transportations, Major General Mohamed Nasrallah, Chairman of the Watania Sleeping Trains and Catering Services Company announced.

Nasrallah pointed out that his company has submitted a proposal to operate in partnership with one of the largest tourism companies. The chairman of the company owned by the Railway Authority added that the proposal depends on operating the train with special tourist tickets. This is to encourage tourism between Alexandria and Aswan and also acts as a source of revenue for the railway.

The Royal Train belonged to King Farouk (the Last King of Egypt) and it is one of the antiques that should be taken care off. The train which runs at a speed of 60 kilometres/hr. was designed by the Italian Fiat company in 1951. It was one of the first trains that worked with diesel; which is why the train has been called the 'Royal Diesel'.

The train consists of two cars and each car is divided into two parts. The first part in the first car contains a cockpit and a restroom for the driver. The second part was designed for the royal guard.

The second car is the Royal Car. It houses a saloon where King Farouk met and welcomed his guests. There was also a restroom for the king, a wireless telephone and a music cabin.

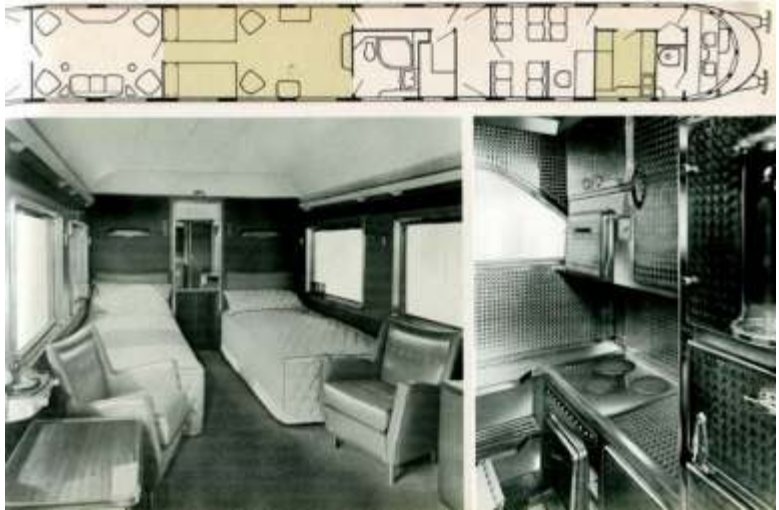
The train's station was established near the Koppa Palace which made it easy for royal guests to reach the palace directly from the train station in Cairo or the station in Alexandria. King Farouk sometimes liked to drive the train by himself.

The train was pivotal until the 1952 revolution, but after that its role started to dwindle.

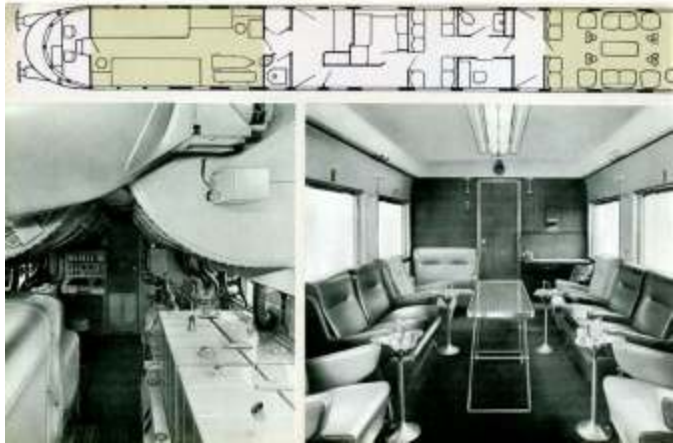
Former President Mohammed Naguib refused to take the Royal Train to Upper Egypt; instead he took an ordinary train with an open cart. When Gamal Abdel Nasser took over, he also refused to take the train and preferred the people's train, the same train as Naguib.

During the time of Anwar Sadat, a new semi-open car was designed in the Royal Diesel. He travelled in it with his guests. Spanish Company, Timonza, in cooperation with the Egyptian Company, Semaf, designed a new armoured car in the train for former President Hosni Mubarak. He only took the train twice."

By coincidence (?) I recently came across a reference in a small Austrian book "Du Dampfross mit rauchendem Schlotte" (Paul Neff Verlag, Wien 1975) p.263f.: (My translation. Ed.): "The Diesel-Electric railcar train that was built by Fiat after the Second World War according to the requirements of the Egyptian King Farouk (himself a keen railway enthusiast) demonstrated all technical finesses of the period. The train comprised two wholly metal carriages of equal length with a



• Photos courtesy of Paul Scheller.



through vestibule, thus building a single enclosed unit. In the first coach was the machinery room and the compartments for the Ministers and Court officials. The second was reserved for the ruling couple and decorated in Farouk's preferred colours of green and silver. Therefore the courtiers would say "Green like the Nile and Silver like the money." In order to enable governmental duties to be fulfilled a telephone apparatus was installed which permitted long-distance communication with any point in the country, and in addition there was a small radio room to allow radio contact, the aerial for this being raised as required from the carriage roof.

Farouk took over this train in 1950; but just two years later he had to disembark from it for the last time..."

C. IRAN.

RAILWAY EXPANSION CONTINUES.

Actually a little late: From 'R.G.I.' 24.04.2018:

"The city of Kermanshah was connected to the railway network when President Hassan Rouhani opened a 110km line from Firuzan on March 20. This forms part of the Malayer – Khosravi corridor which will eventually run to the border with Iraq. The first section from Malayer to Firuzan opened in May 2017, and the remaining 263km between Kermanshah and Khosravi is being built by China Civil Engineering Construction Corp at a cost of 3.53bn Yuan.

On March 21 China National Machinery Industry Corp signed an agreement to build a 132km line from Hamadan to Sanandaj. This followed the signing on March 7 of a €567M deal for China's Sinconst to build the 250km Shiraz – Farashband section of the 400km Shiraz – Bushehr route.

Minister of Roads & Urban Development Abbas Akhundi said other new lines would include Shiraz – Golgohar, Kerman – Bandar Abbas and Kerman – Chabahar.

Construction of the 164km Qazvin – Rasht line is reported to be 80% complete, and planning is underway for the 162km Rasht – Astara line, backed by a US\$500m loan from Azerbaijan which was agreed in January.

The 97km Mahabad – Orumiyeh line is scheduled for completion this year, along with the 30km Yazd – Mehriz line and the 133km Mianeh – Bastanabad link which will significantly shorten Tehran – Tabriz journey times.

China Civil Engineering Construction Corp has expressed interest in an Iran-Armenian railway project which was approved by the two governments in 2009.

A new train ferry has entered service on Lake Van. The 'Sultan Alparslan' was built at Turkey's Özata Shipyard and has four 125m tracks giving a capacity of 50 wagons."

D. QATAR.

(i). DOHA. LUSAIL TRAMS.

In February Alstom shipped the first tram for Lusail from its La Rochelle factory in France. According to Metro Report Intl. 21.02: "It will travel by ship from the port of Barcelona in Spain to Doha, and is expected to arrive next month.

In 2014 Qatar Rail awarded a contract to a consortium led by Alstom and the QDVC joint venture of Qatari Diar (51%) and Vinci Construction Grands Projets (49%) to build the four-line network. As part of this contract, Alstom is supplying 28 five-section trams that will use the APS ground-level power supply system.

The 100% low-floor trams are 33m long with capacity for 207 passengers in two classes: standard and family.

The first phase of the network is scheduled to open in January 2019, and will be operated by the RKH Qitarat joint venture between a consortium of

RATP Dev and Keolis (49%) and local construction, property and trading business Hamad Group (51%)."

(ii). DOHA METRO FLEET TO BE EXPANDED AHEAD OF 2022 WORLD CUP.

From: 'Metro Report Intl. 05.10.2018: "Qatar Railways Co has awarded Kinki Sharyo a contract to supply a further 35 three-car driverless trainsets for the Doha metro project. The contract announced on October 4 takes the total order to 110 trainsets, which are branded Al Faras.

The additional vehicles have been ordered to increase the capacity of the metro, in particular when Qatar hosts the FIFA World Cup 2022 which is expected to attract more than a million visitors. They will also support future expansion of the network which Qatar Rail plans to undertake after Phase 1 of the project is complete.

Qatar Rail has also signed a co-operation agreement with taxi company Mowasalat to provide discounted last-mile transport for metro passengers.

'This will encourage residents and visitors to use public transport even under severe weather conditions since the Karwa taxi can bring the customer to the Doha Metro station,' said Khaled Kafoud, Mowaslat's Government Relations Manager 'This ensures connectivity and reduced waiting time besides making the overall journey smooth and pleasant. This is likely to change the culture of dependency on private car usage and contribute to reducing traffic congestion.' "

UNITED ARAB EMIRATES.

DELIVERY OF DRIVERLESS 'ROUTE 2020'

METRO SETS.

From 'R.G.I.12.11.2018.: "Dubai Roads & Transport Authority has taken delivery of the first of 50 driverless Metropolis trainsets that Alstom is supplying for the Route 2020 extension.

The five-car train was shipped from the German port of Bremerhaven after being assembled at Alstom's Katowice factory in Poland. It is 85.5m long with capacity for 700 passengers at 4/sq.m.

The Route 2020 project to extend metro Red Line by 15km from Nakheel Harbour & Tower to the Expo 2020 site is being undertaken by the Expolink consortium of Alstom, Acciona and Gülermak under a €2.6bn contract. Opening is scheduled for 2020."

ETIHAD RAILWAY STAGE 2 FUNDING.

From 'R.G.I.' 28.11.2016: Tendering for the civil works for Stage 2 of the planned national railway network is expected to be launched shortly, after the UAE's Ministry of Finance and Abu Dhabi's Department of Finance signed a financing agreement on November 27.

The 264 km Stage 1 was completed in 2015, and now carries sulphur from the Shah and Habshan gas fields in the Al Dhafra region of Abu Dhabi to the Gulf port of Ruwais.

Stage 2 is planned to run 605km across the UAE from Ghufeifat on the western border with Saudi Arabia to Fujairah on the east coast, via Mussafah, Khalifa Port and Jebel Ali Port. Completion is now envisaged for 2024, and is expected to increase the volume of freight carried from 7 million tonnes per year to more than 50 million tonnes.

Further expansion under Stage 3 would serve the northern emirates, Dubai Central, Port Saqr and Khor Fakkan, adding a further 250 route-km.

Earlier this year Etihad Rail appointed Egis to provide project management consultancy services for stages 2 and 3, and Jacobs Engineering to provide engineering and design services, including design oversight and construction supervision.

'The budget approval for Stage 2 of the United Arab Emirates' national railway network reflects the keenness of our leadership to implement national strategic projects', said Etihad Rail Chairman Sheikh Theyab bin Mohamed bin Zayed Al Nahyan.

'This project is part of our commitment to the UAE to help it achieve a leading position in transportation quality, in line with UAE Vision 2021, which aims to transform the emirate's economy into a competitive knowledge economy', he said, adding that the railway 'serves as a catalyst for economic growth by connecting key commercial and industrial centres and providing a safe and reliable means of transportation for future generations.'"

E. SYRIA.

(i). RAILWAY AGREEMENT WITH IRAQ.

Syrian-Iraqi railways sign cooperation accord.

"Director General of the Syrian Railways Public Authority, Iyad Ghazal, and the Director General of the Iraqi Railways Public Authority, Ghassan Al-Ani, recently signed a joint cooperation accord.

Reports in London based Al-Hayat stated that the two officials also signed an agreement to construct a new railway between Deir Al-Zour, in Syria, and Al-Qayem City in Iraq, stretching 150 kilometers. The agreement applies to various aspects of the railway system including construction, operation, investment and expertise exchange." (From Albawaba.com, via Steve Sattler).

(ii). RUSSIAN AID PROMISED.

From 'Pakistanpoint.com/en' of 02.10.2018, courtesy of Steve Sattler:

DAMASCUS (Pakistan Point News / Sputnik - 2nd October, 2018): Russian companies will participate in the reconstruction of the Syrian railroads and supply railroad cars to the country, national railway operator Syrian Railways said Tuesday.

"The goal of Syrian Railways is to restore connections between the Syrian provinces, as well as to link them with neighbouring countries, bringing routes to the borders with Iraq and, in the future, to the borders with Turkey," Radwan Tikriti, head

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of the Damascus branch of Syrian Railways, said on the sidelines of the Rebuild Syria exhibition.

"Russian companies will definitely participate in the reconstruction of the Syrian railroads and supply railroad cars to the country," Tikriti added."

From 'Fahrplancenter News' No. 59, p. 15:

(iii). "ACTUAL DEVELOPMENTS.

At the end of May 2018 the Board of the State Railways CFS issued invitations to a conference in which the construction of the satellite-run Operational and Security system (GPS) was proposed for the line Homs – Tartous, currently being renovated. The system is currently under construction, so that freight traffic over this line to the port of Tartous can be commenced as soon as possible. Russian firms are currently busy repairing the tracks along this line.

In April 2018 the General Director of the CFS personally inspected the work of reconstruction of the 18km long line between Homs and the town of Qatina (Qattinah - the station lies some 14km south of Homs). 4 km south of the station of Qattinah there is a gravel pit which provides gravel and other construction materials for the reconstruction of the city of Homs. From a junction some 5km south of Homs to the gravel works this involves a complete reconstruction of the former line Homs – Bekaa Valley – Rayak (Lebanon), which was closed along its entire length at the outbreak of the Lebanese civil war at the end of the 1970's; the short section of 5km was returned to use in 1983 with the opening of the new line to Damascus. This reconstruction has cost a total of ca. €6 M.

In March 2018 workshops staff from Jibrin (near Aleppo) went to repair goods wagons stored at Lattakia and Tartous, so that they could be returned to normal traffic. In only ten days 23 grain wagons, 8 high-sided and 2 flat wagons could be repaired. Since the railways have no foreign currency for purchase of new rolling stock, it must restore first everything which has to some extent survived the war. Fortunately the majority of the staff are still in the country and able to work again to full capacity.

The suburban link between Aleppo and Jibrin is enjoying much use. In addition to the two daily train pairs additional trains are frequently run, for which the railways have made ten passenger carriages useable once more. Especially when school trips are run so that the young people can see at last something apart from the ruins of Aleppo, all ten carriages are required in a single train. These carriages are all from the stock of over 400 carriages delivered from the DDR in batches between 1970 and 1983."

F. LEBANON.

(i). TURKEY HELPS FUNDING TRIPOLI TRAIN STATION RESTORATION IN LEBANON.

This was also published by 'Albawaba', 5th. July 2018, also by Finbar Anderson. Filled with typical journalistic errors, alas.

"For several decades at the beginning of the 20th century, the railway station at Tripoli was the

terminus of the famed Orient Express line. Now, the station sits derelict and abandoned.

Several rusting locomotives from the late 19th century recall a bygone era. The station was built in 1911, during the death throes of the Ottoman Empire. It functioned through the birth of the Lebanese Republic, connecting to Beirut and, from there, Damascus until the network was destroyed during the Lebanese Civil War. Since then it has lain dormant.

While the majority of the network is abandoned and steadily falling into disrepair, the station at Tripoli looks set to be granted a new lease on life, thanks to a protocol signed last week by the Lebanese Railways and Transport Authority – part of the Public Works and Transport Ministry – and the Turkish Tourism Ministry's Cultural Heritage and Museums department. The agreement would see the Turkish body fund and oversee a one-year project to renovate the station.

"When we forget our history, we have no future," said Elias Maalouf, co-founder of Lebanese NGO Train Train, which advocates for the rehabilitation of the country's now-defunct rail network and the preservation of its heritage. "A lot of people don't remember that we had a railway. ... If we had this in the past, why can't we have this in the future?"

Ayşe Kormaz, second secretary at the Turkish Embassy in Lebanon, said that the project was "just a beginning" for Turkey's potential future investment in Lebanon's cultural heritage. A possible restoration of Tripoli's Ottoman-era al-Moallaq Mosque has also been touted. Kormaz said that Turkey was undertaking 5,000 similar projects around the world that share a "common cultural heritage" with Turkey.

She dismissed any suggestions that Turkey was seeking to assert cultural ownership over the projects, saying instead that they focused on a heritage that was "owned by humanity." Neither Kormaz nor Ziad Nasr, head of the Railways and Transportation Authority, ruled out the idea that the station could once again be used as part of a revitalized rail network, although Kormaz emphasized that plans were initially focusing on turning the space into a museum or cultural center.

"Hopefully soon we will rehabilitate the line itself, but now we are restoring the building," said Nasr, who said that there was a lack of public funding for comprehensive preservation of the various buildings and artefacts – such as locomotives – that made up the old network. He noted that the onus for funding such upkeep largely fell on the Culture Ministry.

"We have some projects to rehabilitate the railway sector," he said. "Until then we have some buildings in some places that have a certain significance or importance. It's our priority to preserve them and restore them."

Maalouf welcomed the Turkish Tourism Ministry's spearheading of the Tripoli project, saying it "gives us an advantage as an NGO not to keep fighting with the railway [authority]. ... Let's hope [Turkey] will continue guiding the railway authority."

He noted disagreements with previous projects carried out on the railway network in the past. "I have this concern: are they restoring this railway to

preserve it in an intelligent and cultural way, or are they restoring this building to use it for their project, to make money in a fast and corrupt way?" Maalouf said.

Maalouf criticized the usage of the Beirut train station as a bar. "If this renovation ends up like Beirut, with pubs and wedding venues [that are] ruining the heritage, of course we are against [it]. But if this [renovation] ends up having a train station that brings back the memory of a railway and could maybe become the catalyst for a future railway, of course, I'm for [it]," he said.

Nasr rejected accusations of wrongdoing by the railway authority, noting that no third party had put forward an initiative to restore the Beirut station. "What we allow on our property is according to our bylaws," he said. "We are an investing institution; we have the full right to allow certain usage of our property to generate some income."

(ii). REVIVAL OF LINE FROM TRIPOLI TO SYRIAN BORDER:

More on this topic, from 'Albawaba Business' 12.07.2018: By Finbar Anderson.

"The long-mooted revival of the railway between Tripoli and the Lebanese-Syrian border may have finally found an investor, with profound implications not only for the economy of north Lebanon but for the balance of power in the wider Middle East. "We have a proverb saying, "If you want to get rich, build a road," said Eliana Ibrahim, president of the China Arab Association for Promoting Cultural and Commercial Exchange. Ibrahim told 'The Daily Star' that a Chinese company is ready to submit a proposal to finance the reconstruction of a much-discussed railway from Tripoli to the Lebanese-Syrian border, although she said the bid was "not at the stage" where she could name the company.

The railway, one of the transport projects listed in the government's Capital Investment Plan presented at the recent CEDRE investment conference, would provide China with a means to transport materials from Tripoli into Syria, where Beijing could not only take advantage of the politically contentious issue of reconstruction in the country, but also set itself up long-term as a regional power.

According to Dr. Neil Quilliam, a senior research fellow at Chatham House in London and an expert in Syria and the Middle East, reconstruction in Syria is "a springboard for investment in the region." China, he said, "is looking for typically a 20-to-25 year trend where it's going to be putting money into infrastructure but with a long-term plan of slowly but surely replacing the U.S. ... in the region as a major player."

The cost of the devastating civil war to Syria's economy and infrastructure has been estimated by the World Bank at \$226 Billion. China recently made some major announcements to further position itself as one of the key actors, not just in Syria's reconstruction, but in the region. At this week's China – Arab States Cooperation Forum, China's President Xi Jinping pledged over \$23 Billion in credit, loans and humanitarian assistance to various Arab countries. Some \$91 Million was earmarked

for Syria, Lebanon, Yemen and Jordan in humanitarian assistance.

Lebanon's Economy Minister Raed Khoury attended the forum and returned very positive about the prospect of further Chinese investment in the country. Having met with China's foreign minister, Khoury told 'The Daily Star' that China doesn't "look at Lebanon as a small country of 4 million citizens but as a country with huge potential given its geographical location ... They see Lebanon as a platform for the whole region and for reconstruction as well of Syria and Iraq."

The Syrian regime's recent assault on southwest Syria and the massive resultant flight of refugees to the closed Jordanian border demonstrated that the war is far from over. Nevertheless, Quilliam said that China will not wait for a political resolution to the conflict before making its next move. "The debate on Syria is what comes first, political settlement or reconstruction, and China ... has made it very clear that reconstruction comes first." In order to facilitate such reconstruction, China needs access to a port on the eastern Mediterranean from which to ship materials. Syria has two major Mediterranean ports in Latakia and Tartous, but both present issues to Beijing. First, neither is deep enough to take large container ships. Second, Syria's powerful ally Russia has a major military presence in both, with an air base in Latakia and a naval base in Tartous. "[China] doesn't want to set itself up in direct competition [with Russia]," Quilliam said.

Lebanon offers a number of alternatives. Beirut has a major port, but is constrained in terms of how easily it can be expanded. Furthermore, Beirut does not have the prospect of a rail link to Syria, with freight forced to be shipped over the mountain road to Damascus, which can be impossible to pass in the winter months.

Tripoli, meanwhile, has a large deep-water port, and the prospect of the railway to ship freight. Speaking to 'The Daily Star' in July last year Toufic Dabbousi, head of the Tripoli and North Lebanon Chamber of Commerce, said that the railway was "a daily topic of conversation" in Tripoli. Ziyad Nasr, the head of Lebanon's Railways and Transportation Authority, said that plans for the railway from Tripoli to the Lebanese-Syrian border were, "final. The project is ready ... but there is a lack of funding."

A Chinese investor may be what the railway project needs to get off the ground. While it has previously attracted interest it suffers from a major shortfall in that no potential investors have yet been able to establish what would happen to goods once they reached the border, with no functioning railway in place to ship the freight the remaining kilometres to Syria's closest major city, Homs.

Hassan Dennaoui, a researcher at the Tripoli Special Economic Zone, told 'The Daily Star' that the lack of transparency over what might take place regarding a railway on the Syrian side of the border had put off other investors.

While many potential investors, particularly in the region but also further afield, might face difficulties negotiating the development of such a railway with the Syrian regime, China has remained politically neutral throughout the Syrian Civil War. "It doesn't have to take into account a complex

history and the way it maneuvers and positions itself. It's coming in on a transactional basis, so you don't necessarily have the sensitivities that other states, other actors, even other companies would necessarily have, so it feels it has a blank canvas," Quilliam said.

Furthermore, he said, China's heavy investment in Syria and its willingness to begin work immediately puts Beijing in a strong position when it comes to negotiating any kind of cross-border deals, in a way that other states simply would not be able to achieve.

For Beijing, the reconstruction of Syria looks to be the opportunity it needs to assert Chinese influence in the region. China, Quilliam said, "sees itself as a strategic investor. It's moving from a position where it's invested in the region and in Africa but it's now transforming into a political and diplomatic player."

(iii). On the same theme from 'Fahrplancenter News' No. 59 p.15:

"REACTIVATION OF THE RAILWAY?"

With the Syrian President Assad's offensive against areas east of Damascus it could be that the bloody war in Syria is approaching an end. Should that be the case, an enormous reconstruction effort will be required in this land, that could swallow around US\$250 Billion.

The enterprising neighbours in Lebanon see here an opportunity to cut a slice from the giant cake, so they in 2018 are preparing the port at Tripoli in the north of the country for major expansion. Tripoli lies just 30km from the border with Syria; the port is receiving new container trans-shipment areas and since it offers cheaper tariffs than that at Beirut, its owners expect good results. Work is beginning on the rebuilding of access roads and in some press reports the administrators even speak of reactivating a rail connection to the Port, that was destroyed during the Lebanese civil war (1975-1990). This would include the rebuilding of the 42km long line from Tripoli to the Syrian border station of Akkari, which is on the line Tartous – Homs which is also currently being rebuilt for freight traffic. Large parts of the alignment are still free or covered only by non-asphalted minor roads. Near Tripoli Port there is still the former goods station, filled with goods wagons presumably fit only for scrap. The border bridge south from Akkari has however been missing for many years.

One awaits with interest what may happen here in the coming years."

(iv). RAYAK PROJECT.

While we are at it – a quick click on side-bars brings one to this item on Elias Maalouf from 20th. October 2014:

"Can Lebanon get back on track? First Arab railway to be resurrected in Beqaa Valley."

"Hundreds of train carriages dot the landscape, their locomotives overgrown with shrubs and trees. Green paint peels off the rusting metal frames, the bricks of the buildings that used to shelter them

crumbling. Shattered roof tiles now cover its once humming factory floor.

The train station at Rayak was once home to the Arab world's first rail line and a flourishing train factory. The abandoned site remains a symbol of Lebanon's illustrious railway history, and a reminder of its bleak present.

The first train from Beirut to Damascus, in 1895, took nine hours to cover the 90 miles. A line to Aleppo was finished in 1909. Track was added throughout the 20th century, linking Beirut to Saudi Arabia through the Hijaz line and Istanbul through Aleppo. The allied forces added a line linking Haifa, Beirut and Tripoli during the Second World War. But following the outbreak of Lebanon's civil war in 1975 the railways were thrown into disarray, and passenger services came to a complete standstill two years later.

Older Lebanese are nostalgic for the days when one could travel all the way to Paris by rail. Hayssam Bourji, 60, still remembers the sound of the trains passing by. "I used to ride the trains to Syria and back, just for fun. I would sit on top of the carriage," he says. He has come to Rayak to show his two grandsons that a railway used to exist in Lebanon.

Visiting the station has only been possible since 2005; Under the Syrian occupation it was used as a military base. The most valuable equipment was transferred to the Syrian railway museum at Qadam, and much of it was destroyed when the depot was bombed during the Syrian conflict.

Lebanon hasn't seen a train on its tracks since the last service, shuttling cement to the capital, ceased to run in 1997. Yet the Train and Public Transport ministry still employs 370 people. More than 120 are bus drivers, but many of the remainder fill their days guarding various abandoned sites. Over time, development has encroached on the 90,000 hectares the ministry owns, with construction sites and billboards springing up on top of the railway all down the coast.

In a bid to supplement its £500,000 budget, the ministry has also sold trains for scrap and issued licences for the private use of stations. Several have been turned into bars. Trainstation, a pop-up nightclub which was last summer's biggest opening in Beirut, saw the old Mar Mikhael station converted into an outdoor bar, complete with DJ spinning tunes from a locomotive.

Such modern use horrifies Elias Maalouf, the founder of Train Train, an NGO which aims to revive the crumbling rail network. "They welded projectors and fans on to the trains. It's an insult to our heritage!" he exclaims. "That locomotive is one of five left in the world."

Mr Maalouf has been trying to relaunch the line between the coast cities of Byblos and Batroun, to show the feasibility of having trains running again. "We need a success story," he says. The project, with a budget of £430,000, should take only a matter of months to complete, but Mr Maalouf is still waiting for the green light from the Lebanese government.

Reviving the train line would relieve Lebanon's heavily congested roads; the country's very limited forms of public transport force Lebanese to rely

largely on their own vehicles, private minivans and shared taxis to get around.

The EU's European Investment Bank is funding a feasibility study into re-opening the Beirut-Tripoli line, the results of which should be published in 2016. The dream is not a new one; every few years an initiative pops up. In 2002, a joint Syrian-Lebanese initiative went as far as buying new rails. As with previous efforts, the plan failed due to a lack of funding and political wrangling, and the rails lie unused in storage.

Yet Mr Maalouf and other train enthusiast still believe there's a future for rail in Lebanon. "We have to show people that if we had railways 120 years ago, we can have them again now," he says."

(v). On 29.09.2018 'NNA' online published: REVIVAL OF LEBANON'S RAILROAD. ZIAD NASR KEEN ON REGAINING RESPECT FOR ESTABLISHMENT.

(Written by Rana Serhan Translated by Line Chokor)

"It may not be known to many Lebanese citizens that the Directorate of Railways, belonging to the Railway and Public Transportation Authority of Lebanon, is vacant of employees. Having once over one thousand employees before the Lebanese civil war, the directorate is now employing 9 category IV officers. Due to the lack of labour force reaching the Railway and Public Transportation Authority, said officers have been transferred to work there.

The President and General Manager of the State Railway Authority, Ziad Nasr, appointed on 10/3/2013 as a full-time president for the board of the aforementioned authority, didn't benefit from the first class salary scale fixed in the new number 1 schedule appendix to law 46/2017. The General Manager finally broke his silence, saying that they've inherited a heavy burden caused by the ongoing neglect that has reached this facility.

"Burdens and responsibilities are numerous, more so now that the directorate is suffering from extreme vacancy. This suggests that the talks about wasting state funds by paying employees' salaries are both untrue and unrealistic. There are neither imaginary salaries nor credits being paid for this facility, as should be done to rehabilitate it," he claimed.

"I am saddened to hear that the concerned parties have gotten the wrong idea of not allocating sufficient credits for this facility to help manage routine affairs on one hand, while maintaining the establishment's properties on the other hand. This wrong perception could lead to a loss of rights, as well as encourage encroachers. We, as a management, are taking procedures that require a skilled staff that does not exist, and unavailable financial credits to protect, clean and maintain the facility's properties and ward off trespassers, in order to preserve it. Today, after we've started to take serious measures to stop trespassing properties, we're demanding to fill the extreme vacancy, reinforce the establishment's financial capabilities, and not toy with its fate. The situation requires attention, and allotted credits so the facility could stand on its feet again, despite the heavy burdens on its shoulders. We've collaborated with many

endorsers to fix the vacancy problem; a problem that now requires swift solutions, mainly providing skilled staff members to help facilitate affairs, and keep up with specialists during plan preparation and implementation in order to attain sustainable results. We, as an establishment, have succeeded in building relations with many countries interested in hosting and training a team of employees from the facility. How can we manage that when we don't have any employees?" Nasr wondered.

"I don't want to outbid anyone, because I'm aware of the urgent priorities of the country. Ultimately, the cabinet is the deciding force about its priorities agenda, especially when the country is drowning in issues of electricity, water, waste, etc. There are many faults in the public facilities, but financial credits are necessary for their revival and activation. However, it's my responsibility to prioritize my establishment and its primary needs, while it's up to the cabinet to decide the priorities considering the financial constraints, especially when it comes to railway projects that demand hefty investments. We are a country enduring a financial crisis, but our plans are simple and ready to launch as soon as credits can be provided," the GM announced.

He added that he knew that the Lebanese government was well aware of the facility's importance, and that it would grant the facility the attention and support it needed during the next step. It entails translating the efforts exerted by the establishment in collaboration with the Minister of Public Works and Transport, especially after the preparation of the abundant projects that form sustainable solutions for public transport.

"These projects have captured the attention and the support of many parliamentary blocs, most notably the Democratic Gathering bloc that has recently visited the facility to closely inspect the situation, as well as the prepared projects. The bloc has expressed full support for the efforts made, and it was ready to endeavour to restore this institution's name, in collaboration with many other blocs," he explained.

Three years ago, Nasr had started to fulfil the role of managing the establishment and monitoring the infringements occurring because of certain parties' neglect. "Since the municipalities charged with regulating infringements are basically councils elected by people who infringe and trespass the establishment's properties, said infringements are often ignored for electoral and political reasons. 'This person didn't remove his infringement, why should I?' is often the excuse. All of this is blatant disobedience of the law," Nasr clarified.

Nasr went on to allude to the role of local authorities and public forces in protecting government properties by saying, "According to the law, the branches of public forces are municipalities in different regions, gendarmeries entrusted to protecting public properties from infringements. Municipalities have the power to stop whoever is infringing, as well as call for support whenever the need arises. For example, stopping construction over buildings without any permit is a felony. I, personally, have stepped forward and presented many dossiers to all mayors across Lebanon and have demanded intervention, as well as given direct instructions to

municipalities in order to urge them to fulfil their roles."

Commenting on railway infringements in Lebanon, Nasr said, "Infringements increase and lessen according to the importance of investments in regions and estates over the Lebanese coast. For example, from Beirut to the north of Lebanon, infringements over railways are more common than in the internal regions. Saying that the infringements stand in the way of implementing railway projects is wrong, and the proof is our ongoing efforts and the initiative to remove infringements from many sites, with limited capabilities. We reiterate that our limited capabilities are due to the lack of specialists, engineers and topographers."

"Considering that the wanted credit for the directorate is a waste or unnecessary is not true. Whoever is accusing us of this is certainly helping in dismissing the rights of the establishment. Unfortunately, some of the people we demand credit from, such as the Directorate of Supervision in the Ministry of Finance, have the wrong perception when approaching this subject. I am certainly not talking about the Minister of Finance. The approach is arguing about the benefit of said credits without taking into consideration the exhaustive efforts made by the establishment to stop infringements, as well as the necessity to reveal hidden railway properties, and the dire need to rehabilitate and maintain its institutions. Said institutions must be benefitted from and managed successfully, in spite of the threats received by the establishment and its employees. This hints at the enormity of the works that need to be done, and everyone needs to realize it considering its national profit. Any mere owner needs money to protect, maintain and run his properties; let alone the owner of a business with many establishments and properties all over the country — now abandoned because of the neglect and deterioration on all levels," Nasr confirmed.

"We insist on making the establishments and properties more valuable than before, while also protecting them and shedding light on them. The previous missions require financial support from the government. While waiting for the aforementioned support, we are collaborating with active municipalities who are dedicated to accomplishing good deeds, in order to clean the railway transportation lines. This collaboration ensures the required obligations among public institutions and municipalities to accomplish common interests. Our mission has succeeded in many areas, and where we have failed, we'll apply for serious procedures at the required, competent courts such as the financial prosecution. I'd also like to thank the financial prosecutor for the efforts he's making to pursue our complaints about infringements. Investing and maintaining railway properties are both legally assigned to this public establishment. Therefore, no one can use or own it without prior knowledge about the said establishment. This highlights the importance of this particular branch that is suffering from vacancies on one hand. On the other hand, many burdens and responsibilities lie on the shoulders of the general manager, especially in the absence of a technical team helping him implement projects" he continued.

About the role of the Ministry of Public Works and Transport, Nasr said, "To be fair, the current minister, Youssef Fenianos, is completely supportive of our steps and extremely understanding of the burdens on our shoulders. We had presented urgent recruitment applications that gained approval by the Civil Service Council, and got adopted by the Minister who presented them to the Council of Ministers two years prior. We are often surprised by those who undermine the importance of the establishment and the massive efforts to overcome obstacles."

Nasr announced that he was working on ensuring self-imports through selling tickets to passengers in the joint transportation section, affiliated with the establishment, as well as through collecting working lines, "despite its limitations, due to the lack of machineries and working hands."

"We are taking the necessary legal measures to force the infringers to remove their irregularities and fix the damage they've caused. With the help of the Financial Prosecution, we were able to remove many violations, as well as landfills in the way of railways. Through this initiative, we hope to accomplish the following:

- Preserve the establishment's rights, properties, and bring out the railways' landmark.

- Stop infringements, especially now that the parties assigned to stop them claim that the landmark isn't clear.

- Give a clear signal of the possibility of reviving railway projects. The establishment, along with its humble capabilities, is working on preventing infringements in many sites and does not hesitate to refer the infringers to the required and competent court. Quitting or succumbing to the current reality is not allowed, neither is claiming that all these infringements are preventing the implementation of railway projects," Nasr explained.

"While waiting for the required investment to revive the coastal track, there is a mini project that we hope to implement with the help of a certain party that has shown willingness to help implement it," Nasr added. In the north, there are endeavours to send a specialized team to reveal a part of the railway in order to study a possibility of propelling a small compartment for 10 kilometers. This would reveal the efforts made by the establishment to revive the sector. If, through personal efforts, we were able to propel a small compartment, then with help and support from the government, along with money, we could stop infringements and revive the facility," Nasr proclaimed.

"The establishment has already conducted a full study for the entire track line, through technical support from the European Union, intending to bring the railway back to life on the coast from Beirut to Tripoli. The mentioned studies also include details for another railway project linking Tripoli to the Lebanese-Syrian borders. For these projects to be implemented, a financial investment is a must; investment is either provided by the treasury or through donations and loans," he clarified.

"This track is a priority considering the fact that it links Beirut port to Tripoli port, as well as the city's economic zone, the Rene Mouawad Air Base, and the Lebanese-Syrian borders. Reanimating this

particular track is in line with the efforts made to activate Tripoli's port, and leads to resolving the traffic crisis blocking Beirut's north entrance. The results are tangible, that is why this track is prioritized. That is not to mention that we are not paying attention to the remaining tracks in the south and in the Bekaa. We've already presented a complete vision to the Council of Ministers which has approved to task the Ministry of Public Affairs and Transportation to draft a railway outline that covers all the Lebanese soil," Nasr responded to a question about the choice to reanimate only the Beirut-Tripoli track.

"We must start implementing projects that benefit the Lebanese citizens and fulfil their primary needs. The public transport sector has become a burden that affects the citizens and the treasury alike. This burden is an accumulation of the traffic crisis, troubles of commuting, car accidents, increasing death toll, towering traffic medical bill, and migration from villages to cities. That's why serious investment in the public transport sector must begin, especially since it contributes in activating the economic cycle and in restricting the negative effects on the economic, social, ecologic and touristic levels," the President of the State Railway Authority confirmed.

"This sector contributes to national fusion, considering it provides many opportunities for people from different regions to communicate. The current chaos in the public transportation sector has led to randomness and has reinforced the concept of sectarianism and regionalism. It's time to take the lead and develop a complete system for transportation that covers all the Lebanese regions, and one that includes passenger stations. This way, we'll broaden the scope of mixing and communicating between the citizens that suffer with needs and demands. Reviving the railways will also create new work opportunities for the Lebanese youth of all classes and educational backgrounds."

Nasr then alluded to the public bidding done by the establishment to buy the fuel needed for public buses. That made way for a lot of judgment due to the general ignorance about the nature of this bid. However, due to the mentioned bid, the establishment was able to save 58% of the total of the distribution company's share, entrepreneurs' commission, and the cost of transport. "I would prefer if all establishments who hire would follow in my footsteps in order to save public money," Nasr implored.

"The salary scale hasn't been applied in the establishment because there are no employees in the sector, considering they were let go many years prior. Unfortunately, they don't benefit from any financial, health, and social services from the establishment. It is worth noting that there is a prejudice against the establishment, denying its employees of their right to the salary scale under the 46/2017 law, just like other employees in the public sector. Our few employees have been abiding by their new work schedules adopted by the Lebanese government, yet they haven't enjoyed any bonuses," Nasr concluded."

H. TURKEY.

(i). GEBZE METRO CONSTRUCTION STARTS.

From 'Metro Report Intl.' 05.10.2018: "Construction of the first metro line in Gebze started at Cumhuriyet Meydan? on September 29. The 15-6km driverless line will link Gebze and Dar?ca, serving 12 stations. Construction is expected to be completed in early 2023 at an estimated cost of TL2.8bn. It is envisaged that services would run every 90 sec, offering an end-to-end journey time of 19 min. Four-car trainsets are to be used, with a capacity of 1,080 passengers."

(ii). IZMIT TRAMWAY EXTENSIONS APPROVED.

From 'Metro Report Intl.' 04.10.2018: "From Kocaeli Metropolitan Municipality Mayor ?brahim Karaosmano?lu announced three extensions of the Izmit tramway on October 3. These have been approved by Izmit Municipality.

The first phase of the city's tram network opened in June 2017. The 7-4km line runs from Otogar in the east and Sekapark in the west, from where an extension is being built to Plajyolu. The recently approved extensions include a 1km western extension from Plajyolu to Kuru?e?me and a 3-5km extension from Yahya Kaptan to Alikahya stadium in the east. There are also plans for a 3-5km route from Bekirdere to ?ehir Hastanesi."

(iii). MARMARAY COMPLETION IN SIGHT.

In October's 'Railway Gazette': Marmaray completion in sight at last. "Five years after trains started running through a tunnel beneath the Bosphorus strait in Istanbul, the 77km Marmaray suburban rail corridor is approaching completion after a much-delayed modernisation of existing railways on both sides of the water."

On 23.Nov. 2018 'R.G.I.' reported that the Marmaray Corridor is now due to open in the first quarter of 2019:

Transport Minister Cahit Turhan provided a progress update on November 16 on three new line projects as they near completion under the railway investment Master Plan.

The government's priority is completion of the surface works along the Marmaray corridor which runs across Istanbul from Gebze on the Asian side to Halkal? on the European side. Shuttle services have been running through a tunnel under the Bosphorus since 2013, serving six stations, but these are currently isolated from the rest of the national network.

Turhan said that the full route would open to traffic by the end of the first quarter. As well as enabling introduction of suburban trains over the 77 km route, a third track on both the Asian and European sides would also open for long-distance traffic. This could include inter-city passenger trains to and from eastern Turkey and potentially overnight freight services.

Ankara – Istanbul high-speed trains have for the past several years terminated at Pendik in the eastern suburbs of the city. Completion of the Marmaray works would allow these to run further west either through the Bosphorus tunnel or to return to the historic Asian terminus at Haydarpa?a, which is being refurbished under a programme

launched in 2014. However, this work has been delayed by a series of archaeological finds.

While operator TCDD Tas?mac?l?k has been offering high speed services between Istanbul and Ankara since 2014, the only dedicated infrastructure these have been able to use to date has been the section between Ankara and Eski?ehir. Modernisation work between Eski?ehir and Gebze is still ongoing, and only part of this section will be new alignment.

Turhan also confirmed that the Ankara - Sivas high speed line is expected to open by the end of 2019. Civil works have largely been completed, with work on 13 viaducts and bridges outstanding. The alignment will reduce the distance by rail between the two cities from 603 km to 405 km and the journey time from 12 hr to 2 hr.

The 624km Ankara – Izmir high speed line is now expected to open in two stages, with the first between a junction south of Polatl? on the Ankara – Konya line and Usak planned for completion in the first half of 2020, and the rest being commissioned by the first half of 2021. The line is being developed under five construction packages."

(iv). NETWORK EXPANSION PLANS.

A note in 'Lok Magazin' p.38 states that Turkey is planning a massive expansion of the high-speed network by 2023 from a current 1,213km to around 11,000km; in addition, there would be a further wave of electrification and ECTS would be universally installed.

(v). ISTANBUL METRO SECOND PHASE OF DRIVERLESS METRO OPENS:

In 'Metro Report Intl.' 22.10.2018

"The second phase of the driverless metro Line M5 on the Asian side of Istanbul was inaugurated on October 21 with a ceremony attended by President Recep Tayyip Erdo?an and Mayor Mevlüt Uysal.

The 9.5km eastern extension adds seven stations between Yamanevler and Çekmeköy-Sancaktepe. The initial 10.5km section between Üsküdar and Yamanevler, opened in December, was closed on September 21-24 for testing of the extended line.

A depot has been built north of Dudullu. This is accessed by a 2.5km branch that will form part of metro Line M8, which is scheduled to open in 2019.

As with the first section, construction was undertaken by Do?u? ?n?aat. The firm is part of a consortium, along with Özalt?n ?n?aat and Yap? Merkezi, which is building the final section between Çekmeköy-Sancaktepe and Sultanbeyli under a TL2.3bn contract."

(vi). CONTRACT TO MODERNISE TURKEY - BULGARIA MAIN LINE AWARDED.

From 'R.G.I.' 01.11.2018: "Working with the Directorate-General for Foreign Relations & European Union Affairs, the Transport Ministry has awarded a contract to modernise a 200km section of the main line which links Istanbul with the

Bulgarian border to a consortium of domestic construction and contracting groups Gulermak Agir Sanayii ve Taah and Alsim Alarko Sanayi Tes ve Tic.

The consortium submitted a bid of €489.2M, the lowest of six bids. The contract covers the dismantling and removal of the existing line between Cerkezköy and Kap?küle, and construction of a new double-track formation suitable for a maximum speed of 200km/h. Also included is the procurement, installation and commissioning of 25 kV 50 Hz electrification, signalling with ETCS Level 1, and related telecommunications equipment.

In addition, the contract includes the construction of ancillary buildings, remodelling work at Cerkezköy and Kapiküle stations and the design and construction of two road viaducts, five overpasses, two underpasses, six culverts and six retaining walls. It also covers enhancements at the border station of Edirne, including installation of a pedestrian walkway. Construction work is scheduled to start in early 2019 but no completion date has yet been announced.

The Cerkezköy - Kap?küle route passes through Corlu, where an embankment collapse in July this year caused the derailment of a local train resulting in the deaths of 24 passengers and injuries to 361.

The project is being partly funded through a €327M contribution from the EU's Instrument for Pre-Accession Assistance budget for Turkey for 2014-20. Once this upgrading programme and the surface works for the Marmaray project have been completed, Turkey would have a through rail route between its eastern and western borders."

(vii). SAMSUN LOGISTICS HUB TO BE SERVED BY NEW BRANCH LINE.

From 'R.G.I.' 29.10.2018: "Infrastructure manager TCDD has awarded a TL190M contract for the construction of a railway between the existing Samsun - Sivas line and TCDD's Gelemen rail logistics centre. The lead contractor will be a consortium of Dekovil Entegre Sistemler and Feza Taahut.

The contract involves construction of a 6.7km link between the Gelemen logistics hub near Tekkekoy and a junction with the main line. The work is due to be completed within 180 days of contract award and covers all civil and railway fit-out work including supply of ballast, sleepers and related components.

The Gelemen logistics centre is located to the east of Samsun, close to the city's port district. The port is the main trans-shipment point on Turkey's central Black Sea coast, owned by TCDD and operated by Ceynak Lojistik ve Ticaret under a 36-year lease.

Gelemen is one of 21 rail-served 'logistics villages' being developed by TCDD, all of which are expected to be operational by 2023. The branch will link the Gelemen site to the 378km Samsun - Sivas line, on which an upgrading programme worth €279M has recently been completed."

A caption adds that "No fewer than 23 rail-connected logistics hubs are being developed by TCDD for opening by 2023."

(viii). URBAN RAIL REOPENING IN ANKARA.

From 'Fahrplancenter News' No. 59 p.16.

"Following two years of construction work the urban railway services between Kayas, Ankara and Sincan could be resumed from 12.04.2018. The 'Baskentray' system as it is known has received separate tracks so that trains do not have to share the infrastructure with long-distance, high-speed and freight services. This enables acceleration for all trains on this line. In addition to the new tracks the signalling system was modernised, all stations were thoroughly rebuilt and made more 'customer-friendly'. The new line is electrified and is either 4- or 6-track. There are 28 stations, two of which have links to the underground system. Trains now run every five minutes. Hyundai-Rotem has now delivered 96 new carriages. Passenger capacity has now grown to ca. 200,000 per day, which is about seven times what the line could cope with before."

(ix). FERRY TRAFFIC ON LAKE VAN.

From 'Fahrplancenter News' 59 p.16:

"During 2018 the two new railway ferries for the Lake Van were delivered. The three older ferries had failed increasingly frequently due to a lack of spare parts, and this has hindered traffic between Turkey and Iran. In addition, their capacity was limited to 8 – 12 goods wagons. The two new ferries each have four tracks of 130m length and can take, depending on the type of wagon, between 24 and 32 vehicles and the total capacity has therefore grown from 500 to 4,000 tons.

However, unfortunately another problem has grown over the time. Since the old ferries failed so frequently a substantial traffic in Iranian lorries had grown between the two countries; due to the new economic sanctions many of these lorries run almost empty and there has been much so much pressure on tariffs that the railway is no longer competitive. In consequence the ferries now wait for wagons, whereas beforehand the wagons waited for ferries!"

(x). INTERNATIONAL TRAFFIC TO IRAN.

From 'Fahrplancenter News' No. 59: "Despite the sanctions, the Islamic Republic of Iran State Railways have reintroduced passenger services between Tabriz and Van on 16. June 2018, after a break of some three years. The train departs Tabriz every Monday and from Van every Tuesday. The 331km journey lasts some 8 hours and a single ticket in a Couchette costs €10.80. Each train offers 240 places in four carriages. Should this train be well frequented, the two railways have agreed to introduce a second weekly train pair."

(xi). MELONS BY TRAIN.

Also from 'Fahrplancenter News': "Until now the transport of fruit and vegetables in Turkey was totally in the hands of the road lorry lobby. The TCDD is now attempting to change this. In mid-July 2018 together with the logistics contractor Raykam cool containers loaded with melons were transported from Mersin in the south via Kars and the new railway to Georgia and Azerbaijan and through to

Russia. The entire transport period is given as six days but a special despatch method can reduce this to four days, which could not be achieved by road. In addition, the tariff of the joint railway systems is lower than that offered by road transport. It is proposed to use the transport route Mersin (Turkey) – Makhchkala (Russia) permanently for fish traffic."

(xii). POLITICS.

Although we (very deliberately) normally try our best to avoid Politics in this magazine, the issue of extensive State-funded infrastructure expansion in Turkey (we focus only on the railways but there is more) is relevant; Here is a brief political comment by Steve Sattler: "The second major factor of the Turkish refugee flows is the ongoing economic crisis. The country's economy is in a shambles. After years of growth, low-interest rates, and massive, government-backed construction projects, the economy is now in free-fall, and the consequences for Turkey's stability are an open book. [consider Iran, Egypt and Syria]

From the start of 2018 the Turkish lira has lost 42% of its value against the dollar. Inflation rose from 7.2% in 1/ 2015 to 15.9% in 7/ 2018. Ankara also has a high level of debt due for repayment. According to the estimates of the Fitch credit rating agency for 2018, Turkey's total financing needs will be almost \$230 billion.

Despite the bleak economic situation, Erdoğan cannot implement a tighter monetary and fiscal policy out of fear that he will lose the support of his political base. Instead, he has adopted inflammatory, conspiratorial rhetoric against the global financial markets, which he accuses of "waging a secret war against Turkey." The country's precarious economic situation is exacerbated by its strained relationship with the US. This is the menu for a proper divorce from the US and Europe. Shades of Iran."

I. TURKEY (& INTERNATIONAL).

(i). HUB FOR TRAFFIC FROM ITALY.

From 'Today's Railways Europe' 273 p.41: "In July, Italian State Railways (FS) and Azerbaijan Railways (ADY) signed a Memorandum of Understanding on cooperation to develop rail freight traffic between Baku, Tbilisi (Georgia) and Kars (Turkey), a hub for traffic from Italy bound for Iran and China. Mercitalia Intermodal, formerly CEMAT, will be responsible for traffic between Italy and the port of Mersin (Turkey). ADY will supply services and logistics for intermodal transport from Turkey to Central Asia and China."

(ii). TURKEY – AZERBAIJAN.

In 'Today's Railways Europe' 273 (Sept. 2018) p.40:

"Azerbaijan state operator ADY ordered 27 sleeping and three dining cars from Stadler in June 2014 for services between Baku, Tbilisi, Kars and Istanbul. Since then it has had financial problems, while there have been delays in completing the new line across the border between Georgia and Turkey.

In January 2018 the parties agreed to reduce the order to 20 coaches, sufficient to form two rakes. By June ten of the coaches had been built at Stadler's Altenrhein factory, and these are in store in Switzerland. Deliveries to ADY are now scheduled to start in March 2019, with testing on the 1,520mm gauge network to start in Azerbaijan to have the stock authorised according to GOST standards."

Also from 'R.G.I.' 02.11.2018:

Passenger services on the Baku – Tbilisi – Kars route are to be launched in the third quarter of 2019. Azerbaijan's national railway ADY has announced.

The announcement on October 30 marked the first anniversary of the official inauguration of the Baku – Tbilisi – Kars railway corridor. So far the route has carried about 3 000 containers, ADY said, with the main traffic being construction materials, electrical equipment, grain, road vehicles and transit traffic from Russia, China and Central Asia to Turkey.

In June 2014 ADY awarded Stadler a contract to supply three sets of 10 coaches for use on overnight passenger services on the route between Azerbaijan and Turkey, potentially operating as far as Ankara and Istanbul. The first was unveiled at InnoTrans 2016. ADY said delivery of the initial set of 10 coaches is now planned for the first quarter of 2019, with the second rake to follow.

Each 10-car set will have a total of 257 berths in first and second class, family and accessible compartments. The 160km/h aluminium bodied vehicles meet GOST and UIC technical requirements, with redundant air-conditioning systems designed for temperatures from -40°C to 45°C, controlled-emission vacuum toilets and an emergency generator which can provide power for 24hr.

The DB AG/Rafil Type V adjustable wheelsets supplied by BVV will enable through running from the 1,520mm broad gauge used in the former Soviet Union to the 1,435mm standard gauge used in Turkey, taking around 5 min. for an entire trainset to change gauge while moving at low speed.

A detailed article on the Baku – Kars – Tbilisi railway project and its role in the wider development of Eurasian transport corridors appeared in the June 2017 issue of Railway Gazette International magazine, which subscribers can access in the digital archive

J. AFGHANISTAN:

Not directly Middle East, more Eurasia but still relevant in terms of future through traffic: From R.G.I. 15.11.2018: "A memorandum of understanding for the development of the freight terminal at Aqina on the Afghan-Turkmenistan border, including the construction of 10 track-km of main line and sidings, was signed by the Afghanistan Railway Authority and Turkmenistan's Ministry of Railways in Ashgabat on November 2.

The MoU has six articles, under which the countries have agreed to enhance co-operation to develop trade, transit traffic and economic relations.

The railway running approximately 90km between Kerki (until last year known as Atamyrat) in

Turkmenistan and the border facilities at Ymamnazar in Turkmenistan and Aqina in Afghanistan was built and funded by Turkmenistan, with construction being launched by the presidents of Turkmenistan, Afghanistan and Tajikistan in June 2013. It was opened with a ceremony in November 2016.

In spring 2017 Afghanistan's cabinet approved the construction of the additional 10km of track at the terminal. There are also proposals to extend the line around 35km to Andkhoy, the first significant town in Afghanistan.

Last year Turkmenistan funded work to upgrade the older Soviet-built cross-border link between Serhetabat and the freight terminal at Towraghondi in Afghanistan."

K. 2019 MIDDLE EAST RAIL CONFERENCE.

Anyone interested in this conference, which will be held in Dubai in February 2019, is invited to go to www.middleeastrail or contact: marketing@go.terrapinn.com for a link to the brochure and programme.

L. FROM ISRAEL TO SAUDI ARABIA.

KATZ: 'GREAT INTEREST' IN ISRAEL-SAUDI RAILWAY PLAN

Transportation and Intelligence Minister Israel Katz is advancing a plan to connect Jordan and Saudi Arabia to Israeli ports.

by Eytan Halon. Jerusalem Post, Oct. 15, 2018:

From 'Jerusalem Post'

"There is "great interest" in an ambitious trade plan to give Middle Eastern nations including Saudi Arabia and Jordan access to the Mediterranean Sea through Israel's ports, the Transportation and Intelligence Minister Israel Katz said Monday. Under the plan being advanced by Katz and Prime Minister Benjamin Netanyahu, the Haifa to Beit She'an train would extend eastward across the border to Irbid, Jordan, and southward to Jenin where Palestinians could access it. From Irbid, the train tracks would link with existing the Hijaz Railroad and planned lines extending south through Jordan into Saudi Arabia and further east to the Persian Gulf.

"There has been great interest in the plan," said Katz. "In our government-to-government meeting with Angela Merkel, I showed the film [depicting the initiative]. The German government is already interested that German companies will take part in the initiative. The United States is the patron of the [entire] process."

An annual trade could be worth \$250 billion by 2030. "This is something that strengthens Israel economically, and is beneficial to the Palestinians. The project is being advanced both publicly and in secret," said Katz. "This is an example of how security cooperation and aspirations for peace can lead to initiatives – in a way that is mutually beneficial." Katz emphasized that mutual threats, including Islamic terror in Sinai or Iranian activity in

Syria and Yemen, have created a common denominator for Israeli and Arab states. "There is room to advance economic cooperation regionally, and improve the lives of all sides." (Herb Keinin contributed to this article.)

And again on 01.11.2018, by Seth J. Frantzman:

"Transportation and Intelligence Minister Israel Katz is heading to Oman to discuss a regional rail line at a transportation conference in Muscat.

This comes on the heels of the the prime minister's visit and foresees a regional peace train that would connect the Mediterranean Sea to the Indian Ocean. There hasn't been such an ambitious plan for 100 years in the region. A survey of the existing rail infrastructure in the region shows why any plans would take decades to complete.

The Ottomans built the first great railways in the Middle East. They strung a web of lines across Syria that stretched to the Hejaz, Baghdad and Haifa. It wasn't easy going though. The rail line from Haifa to Damascus that passes through Dara'a took 15 years to build. The line to Baghdad that begins in Istanbul and goes through Aleppo and Mosul wasn't complete until the 1940s, after the empire had expired. The British contributed the next layer of lines, from Egypt to Beersheba and beyond, partly used during World War I to supply troops in the field.

The War of Independence changed any fantasy of a region linked by rail lines. Because of Israel's strategic location, from the Gulf of Aqaba to the Mediterranean, rail lines that once connected Egypt to Jordan and Syria became dormant. But Katz's ideas might revive that. Jordan could become a regional transportation hub under new plans. In 2010, Amman began to look at the feasibility of a

would replace part of the historic Hejaz (Hedjaz) railway that the Ottomans built.

Iraq once had a railway network from the British period to the era of Saddam Hussein. After 2003 the new Iraqi government planned several lines, including one to Syria and Jordan. However, the only one that functions and has continued to commission trains is a line from Baghdad to Basra. In 2012, Iraq bought a new locomotive from China.

Ideas for refurbishing other lines were put on hold due to the war on Islamic State. Similarly in Syria, the civil war destroyed the rail infrastructure. Neighboring Lebanon also once had a railway system, much of it developed by the French. A plan to resume its use from Beirut to Tripoli, and perhaps onto Homs in Syria, was scrapped due to the Syrian war and other tensions. A Chinese delegation arrived in September this year to look at the feasibility of investing in the project again.

Unlike Syria, Iraq and Lebanon, with their decaying rail infrastructure, and Jordan, which has infrastructure but has yet to invest in new lines, Saudi Arabia's Saudi Railways Organization has 1,380 km. of track, mostly from Dammam on the Persian Gulf to Riyadh. A second line called the Haramain High-Speed Railway, the largest electric train project in the Middle East, opened in September and links Mecca with Jeddah, with plans to reach Medina.

In the United Arab Emirates, Etihad rail is planning a 1,200 km. line that will eventually reach the Saudi Arabian border and Oman. It is being built in stages with a freight line that will run along the coast including the major cities such as Abu Dhabi and Dubai. It has a line, opened in 2013 that links oil fields at Shah and Habshan to the port at Ruwais. It was envisioned as part of a Gulf railways network,

but has run into some hurdles. In 2016, parts of the project were put on hold but are expected to be re-activated according to an article in The National.

Oman, where Katz is speaking, has been increasing its rail network in recent years. In 2015, Sultan Qaboos bin Said al-Said signed off on two more phases of a multi-phase rail network. The first phase links Al Buraimi on the border with UAE with the port of

Sohar. A second phase would stretch down to Ibbri and another phase would go down to the port of Al Duqm. Eventually it could be 2,135 km. long.

To link all this together, Saudi Arabia has to complete its North-South Railway project. The 2,400 km. line would link Riyadh to Al-Haditha on the Jordanian border. It would give Saudi Arabia around 3,900 km. of track. The project began in 2005 and was supposed to have portions completed by 2012. In 2017 the first passenger train travelled from Riyadh to Qassim, but a lot of work remains to connect it to the UAE, Oman and Jordan.

Whatever fantasies there are for a peace train to connect Israel and the Gulf states will take decades to complete, judging by the relative snail pace of other railway plans in the region."

M. RAIL LINK FROM ISRAEL TO OMAN.

Rail from Israel to Gulf 'makes sense,' Israel's transport minister says in Oman

"Israel Katz declares train link from Mediterranean to Gulf states would be 'beyond political and ideological disagreements'. (By AFP and TOI staff 07.11.2018);

MUSCAT, Oman — Transportation Minister Israel Katz, in the Gulf State of Oman on Wednesday, pitched plans to link the Mediterranean to the Gulf via the Jewish state, as the country pushes unprecedented public rapprochement with the Arab region.

"It makes sense and is beyond political and ideological disagreements," said Katz. Israel currently has diplomatic ties with only two Arab states, Egypt and Jordan, but not the Sultanate of Oman.

The "Tracks of Peace" rail link, which Katz said was supported by the administration of US President Donald Trump, was "based on two central ideas — Israel as a land bridge and Jordan as a regional transportation hub."

Katz, who was speaking at an international transport conference in the sultanate, said the proposed railway was favourable to Saudi Arabia and neighbouring Gulf states — as well as the Palestinian economy.

"It will create an additional trade route in the region, which is shorter, faster and cheaper, and will contribute to the economies of Jordan, the Palestinians — who will also be connected to the initiative — Israel, Saudi Arabia and the Gulf states, and in the future Iraq as well," Katz said.

Katz is pushing the ambitious rail plan despite facing criticism at home where a recently launched fast train link between Jerusalem and Ben Gurion Airport has been hit by repeated delays and faults that have seen trains cancelled or stuck in tunnels. The train service is to eventually be extended to complete a high-speed line from the capital to Tel Aviv.

Speaking to the Hadashot news channel on Wednesday from Oman, Katz said that the problems "will be fixed" and noted that the number of passengers using the service has steadily increased every month since its launch in September.

Katz's trip to Oman comes less than two weeks after Prime Minister Benjamin Netanyahu made a surprise visit to the Gulf sultanate — the first in more than 20 years by an Israeli premier. The trip was a coup for Netanyahu, who wants to bolster ties with the Arab world in the face of the perceived expansion of Iranian influence across the region. It also follows highly publicized visits late last month by Israel's culture and communications ministers to the United Arab Emirates."



• Aqaba Depot. ca. 2002. Photos by Eric Stuart,

railway project according to the Jordan Times. But the idea never materialized.

In August 2018, reports indicated that a Chinese company might help build several lines linking Aqaba to Amman and Amman to the Syrian border via Irbid or Mafraq. Another line would go through Zarqa to the Saudi and Iraqi borders. It

NOTES AND COMMENTS.

(i). CORRECTION TO 122:04.

Corrections to 122. FARES ON NEW JERUSALEM LINE.

Jeremy notes: "The vouchers are in addition to the normal tickets. They were meant to ensure that no more than 400 passengers would ride on each train, but as many of the trains were nearly empty, I foresee this requirement being dropped. Also if you start from Jerusalem, you can buy the ticket for free, but starting elsewhere you have to pay."

It seems there was much confusion and Sybil writes that in mid-October a TV programme revealed an average of six passengers per train! In other words, as one might expect, the rush to get some press photos of ribbons being cut led to the opening of what is meant to be a through line to Tel Aviv and the rest of the country going off at half-cock.

(ii). TZEMACH COMMEMORATION.

Since November 1918 marked the official end of the First World War (admittedly it was only an Armistice, though often portrayed as a Victory) there have been several centenary commemorations in recent months. One was held on 25th. Sept. 2018 at Tzemach / Samakh railway station to mark the battle here in 1918 – "The Light Horse Charged Before Dawn" – 19 Australian soldiers fell and at a ceremony wreaths were laid to commemorate them by H.E. Chris Cannan (Australian Ambassador to Israel), Idan Greenboim (head of the Jordan Valley Regional Council) and Prof. Shimon Gepstein (President of Kinneret College).

(iii). E.S.R. KIOSK LOCOS AND DISINFECTOR SETS.

Chen Melling recently sent a query concerning the use of 'Kiosk engines' from Egypt on the Palestine Military Railway for disinfecting (i.e. de-lousing) purposes. He has dug out two references in 'The Locomotive Magazine' for 15th. August 1903 p.100f. and (partially as a correction) 10th. October 1903 p.213f.

The first: "In 1858-9 Messrs. R. Stephenson & Co. delivered 11 engines which might be described as an assorted consignment, inasmuch as they comprised seven different classes... One was a single-wheeled tank engine (R.S. & Co. 1181) with 5-ft. driving wheels and cylinders 8-in by 14-in. A canopied car was carried on a trailing bogie, the wheels of which were 3-ft.6-in. diameter. The fixed wheel base between the leading and driving wheels was 8-ft.7-in. and the total wheelbase of the combination engine and carriage 22-ft. 3-in. The total heating surface was 409 sq.ft. The well tank had a capacity of 400 gallons and the coal bunker had a fuel space of 4½ cwt. only. This engine, which has erroneously been described as the Khedive's engine, disappeared many years ago. It was probably used by a former viceroy, but must not be confounded with a somewhat similar engine and car now in use.

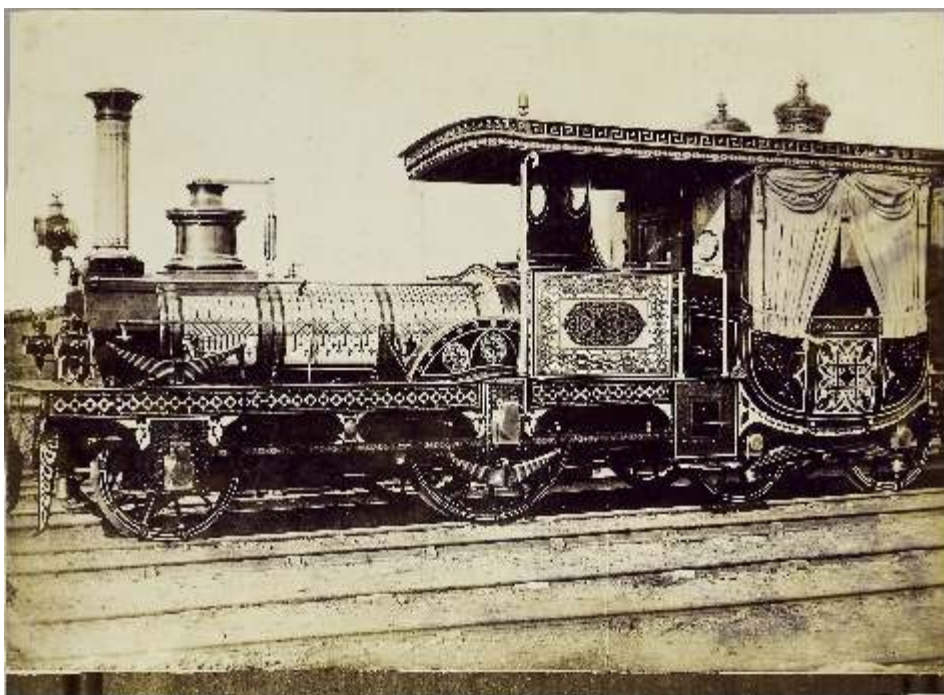
In October: "A combined engine and saloon for Said Pasha's private use was built and delivered in 1862 by Messrs. R. Stephenson & Co. (makers No. 1295)... and had outside valve chests and eccentrics, the cylinders being placed behind the leading axle. The saloon is carried on a four-wheel bogie. The cylinders of this handsome little engine are 9-in by 14-in and the single driving wheels are 5-ft. in diameter. It was originally No. 63, and was afterwards No. 300, but is now No. 30. The late Khedive Tewfik Pasha rarely, if ever, used this engine, and it stood for years in the running shed at Boulac, but in 1896 the present Khedive decided to make use of it to convey him between his summer residence at Montaza and Ras-el-Tin palace at Alexandria, and for this purpose it is now kept at Alexandria.

A good story is told of the present Khedive, who by means of this engine was able to do some 'ticket collecting' on his own account. At the end of each summer the Khedivial Court moves from Alexandria to Cairo, and a few days prior to this event a special train is run to convey baggage and the household servants. Several ingenious natives were wont to pass themselves off as part of the establishment and obtain a free railway journey to visit their friends at Cairo. Somehow this got to the ears of His Highness, who said

nothing but quickly had No. 30 put into steam, and together with one or two attendants set off to a point near Millaha Junction, where he had the special stopped. Tickets were then examined, and a good many enterprising individuals were turned out of the train, bag and baggage, and left to return to Alexandria on foot, a nice little walk of ten miles in a hot sun. Since this event, which occurred some five years ago, the Khedivial special has not been so largely patronized as formerly was the case."

Clearly such little mini-steam railcars had little haulage capacity but they could be used to create steam for delousing clothing and humans, thus sparing other, larger locomotives for other urgent services.

In the IRM archives are correspondence relating to ESR saddle-tank engine 894 and truck 5511 at sidings in Kantara in August 1920, long disused; engine 5150 and a truck 5510 on a length of track near Kantara West (i.e. on the other side of the Canal), still in operation; and engines 15 & 21 which by 22. Feb. 1922 had been sent to Kantara for storage "with the L.N.W.R. Engines."



(iv). IC3 REFURBISHMENT.

In Denmark! In 'Today's Railways Europe' No. 273 p. 53: "Danish State Railways is to internally refurbish its 96 IC3 DMUs as they will remain in service until the latter part of the 2020's. Work will include re-upholstering the seats, fitting new carpets and replacement of panelling. The work will be carried out as the units come in for routine overhaul over the next two years."

In the meantime many of Israel Railways' IC3's remain in open storage, unserviceable.

(v). BEDOUINS ON THE TRACKS.

In a small book of collected anecdotes about railways, "Eisenbahn Brevier" by Gunther Martin and Alfred

Niel, published by Paul Neff in Vienna 1975, I came across the following (p.63f., my translation – the style is not exactly 'contemporary'.)

the 'Centrum Judaicum' in Berlin in October 2018, introduced by her son, Rabbi Tovia Ben-Chorin.

"The King's Iron Road" is what the Bedouins called the Saudi Arabian railway line from Dammam on the Persian Gulf to Riyadh built under the government of Ibn Saud in 1950/51. This was not without its difficulties. When the nomads passing through the desert spied the freshly-laid tracks they thanked the Prophet for this sudden, unexpected blessing of wood, and used the sleepers for their camp fires. The railway company therefore saw itself compelled to employ steel sleepers, which made the construction substantially more expensive.

The training of native personnel was also something which brought many problems. The Sons of Allah were easily recruited to become locomotive or railcar drivers, but they simply could not understand why the machines and carriages had to be maintained and cleaned. There were endless debates after accidents. It was not unusual for a Bedu to set his camp for the night simply between the rails, and then he would be run over by a train.

One cannot derive any especial advice concerning railways from Mohammed, and in consequence the allocation of responsibility and blame became a complex issue. Since in Arabia today the concept of blood vengeance still rules, a locomotive driver could be threatened with death if he could not prove that the accident was due to a 'higher power'. This 'higher power' is the speed of the train. Because, according to the Koran, it is always the one going faster who is declared to be the guilty party in an accident, the Railway administration would have to pay the relatives of the deceased the 'Divah', the Blood Money, in order to prevent those angered at the loss from taking their revenge upon the engine driver himself according to the ancient laws of the desert.

Maintenance of the timetable on the 'King's Iron Road' depends upon all sorts of coincidences. It can for example happen that the staff of a Sheikh simply stop a train in the middle of the route. If the tribal head is still at his breakfast, then the train has to wait until the Eminent One considers it to an appropriate time to climb into the iron horse.

But an Arabian breakfast can last for hours....."

(vi). THE RIGHT WAY TO TRAVEL.

In 'Today's Railways Europe' No. 273 (Sept. 2018) p.62 is an item on a special train travelling through the former Czechoslovakia (i.e. both the successor republics) comprising historic locos and historic saloon coaches formerly used by various Presidents and party potentates. The Editor cannot resist citing the following:

"The train also includes dining car Aza 1-0083 originating in 1891, which formed part of the imperial train of the Austrian Emperor Franz Josef I; Aza 1-0085 which was originally built in 1906 for Baron Lionel Walter Rothschild; and Ca 4-5086 (Ringhoffer Praha, 1931) which houses an exhibition on presidential travel by train."

(vii). JERUSALEM NAVON STATION. UP AND UP.

Lev Seltzer and his son have made a brief video which, speeded and condensed to just under two minutes, shows just how far it is from the platforms at Navon station to the surface level! This is truly a station for escalator enthusiasts.

<https://www.youtube.com/watch?v=XZyuVB-Mdb4>

Under:

<https://www.youtube.com/watch?v=Mrzg8y7bx5A>

one can see a film shot through the window during a journey to Jerusalem.

And: <https://www.youtube.com/watch?v=6VGjHPrcOBs>

leads to a 5-minute official film entitled "Faster to Jerusalem".

(viii). 'PALESTINE PEOPLE'.

On August 16 1946 the 'Palestine Post' (forerunner of the 'Jerusalem Post') published one of a series of sketches by Gabriella Rosenthal, entitled 'Lydda Express'. It shows the train at Lydda ready for Jerusalem – in the 1st. Class on the left are army officers, including one in Scottish finery, to the right is a 3rd. Class coach with a mixture of 'Palestine People', as the series is called. This was one of many drawings exhibited at

(ix). WAGONS-LITS SOCIETY FORMED:

CIWL stock operated also on the Palestine Railways, from Cairo to Haifa and Jerusalem. A new society has been formed for those interested in these (and night trains generally) for details:

"In this period before the launch of Amis des Wagons-Lits, we are contacting the railway media throughout Europe to spread the word about this development and likewise we aim to contact all the owners of former CIWL cars. Today, we believe the total is about 360 Wagons-Lits, wagon restaurants, Pullmans and fourgons – the classic international luggage and mail cars of the between-the-war years. We hope you feel this information is of value to your readership, both those whose interest covers Europe's railways past and present, but also those who may wish to find out more about Amis des Wagons-Lits.

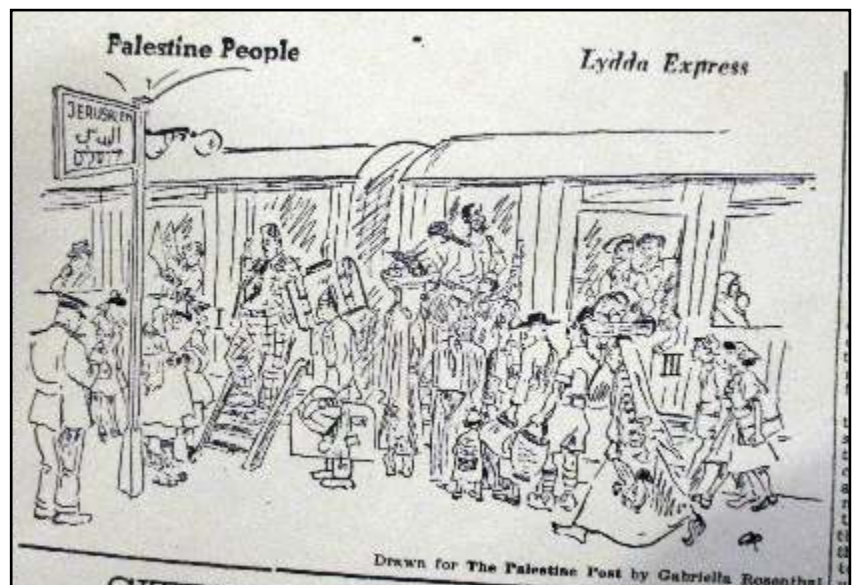
The following contacts will provide further details in due course and can be contacted by e-mail:

Brendan Martin (btmartin@btinternet.com) based in UK

Chris Elliott (christopher.elliott@club-internet.fr) based in France

(x). COLIN GARRATT.

Alas, another one leaves the platform – Colin Garratt, railway author and photographer, passed away on 5th. October.



IRAN TAKES HER VEIL OFF.

By Kees Sinke.

(a). The following article appeared in 'Rail Magazine' 336, pp. 70ff. Translation from the Dutch by the Editor. The author was a participant in the tour organised by Bernd Seiler and all comments on the country and politics are his!

"Iran is not a country one thinks of immediately as a holiday destination, but here one will find nevertheless a report on the first acquaintance with its railways. In recent years Iran has gradually opened its doors and so in 2015 the realization dawned that it should be possible to organise a photographic expedition there for 2016, with the aim of photographing the trains. This then took place at the beginning of May 2016 – a journey that in fact provided much more, due to the many positive impressions, the unpleasant people and – what was of course the main interest! - the many attractive locomotives.

For many years Iran had a negative image due to its atomic policies, but now that this problem has been politically resolved it is as though a veil has been thrown off and there are now travel possibilities. Iran lies squeezed between a number of countries with varying degrees of conflict, such as Iraq, the eastern part of Turkey and Afghanistan. In Iran itself you don't notice anything of this; even though the journey brought the participants to within fifty kilometres of Iraq.

Iran is forty times larger than the Netherlands and has 85 million inhabitants; of whom some twelve million live in the capital Teheran. This is an enormous city covering an area of some twenty times fifty kilometres with the Alborz mountains on the northern edge which reach a height of 5604 metres and on the southern side the desert of the plateau. It is a city where traffic flows properly only in the middle of the night. During the day the number of cars is so enormous that one can reckon on a waiting time of some five to seven minutes at each traffic light.

The People.

The first thing one notices is that the people are gracious. During the journey everyone whom we met was very friendly, interested, open and eager to start a conversation. In many cases that went well in English; this is one of the basic languages taught in schools.

In Europe we have an image that all the women are covered in black veils; it was noticeable that women in burkas are more common in Europe than in Iran. The women are charming, but wear usually a headscarf in different colours which also suits them well. Only when in state service is it necessary to wear a black headscarf. The generosity was made palpable when we walked in the early morning through the old city of Isfahan. An inhabitant shared his fresh, just-collected bread with the group. It is not good to refuse, this would be classed as an insult.

Safety.

Iran is often described as a dangerous country. Whoever actually comes to the country sees that this is not the case. In the West there is a feeling that Iran is not a safe place; the contacts the group had with the police were instead considered to be friendly and helpful. Many people want to make a Selfie and that was also the case with the policemen. So long as you stick to the basic rules there is nothing to worry about.

Out in the countryside and in the areas which are almost inaccessible it is a bit different. In the small villages there is a different culture and it would be inadvisable as a Westerner to walk around alone laden with photographic equipment. If you are together with your wife you will be welcomed. The biggest danger in Iran seems to be the road traffic. That can sometimes be really wild. Three cars driving next to each other on two lanes on the fast roads is not uncommon.

Photography.

The aim of the trip was to photograph trains. If you check the website of the railways you will find that photography is forbidden, but in fact Iranians are always happy to photograph each other and that happens on stations too. That seems to be no problem. When preparing for the trip in 2015 the guide was sent to consult the local police on the station and that seemed to be no problem and one could travel further. For our trip a photographic permit for all the days had been prepared and there was also someone from the

railways always with us in case any problems needed to be quickly resolved. On any self-respecting station there is always a small police post.

The railway personnel are very friendly and curious. In many cases one may be invited inside to take a look. Here it is normally desired that one removes one's shoes and place them in the shoe rack by the door. During the trip the permit had to be shown a few times; there were also unexpected delays caused by the police. For example, the tour bus was standing parked on the emergency lane of the motorway and the photographers were standing in the countryside awaiting a train. Within a few minutes the police appeared; but instead of a prohibition the police actually set up a protection for the bus and after the photo had been taken we all had a very friendly handshake.

Travel.

To travel to Iran one needs a valid passport and a visa. That is normal to ask for in the Netherlands and takes a couple of weeks. In Germany it is organised within a week. In order to apply for the visa various forms have to be filled in on the computer which must then be printed out and taken along, including a few passport photos. This results in an impressive adhesive section with photo inserted into the passport. Involvement in terrorist activities leads immediately to a visa application being rejected. But that applies to any country that demands a visa. Once one has the valid visa and a valid travel insurance then nothing stands in the way. On arrival at Tehran Imam Khomeini International Airport the border controls are no problem. You get a stamp on arrival and departure and that is that.

Railway History.

Things were still for a long time when it came to railways in Persia, as Iran was formerly called. The beginnings of railway building in the beginning of the last century had little effect, in Persia this was limited to some narrow gauge lines. At this period the country was contested between Russia and Great Britain and as a consequence no-one was really interested in building railways. During the First World War the British, Turks and Russians occupied Persia and at this period a start was made by the occupiers on building railways.

A real boost came with the end of the 1920's by Reza Shah, the new leader of the country. He saw Persia as an important country at a crucial point in the region – the east-west link from Europe to India and China and the north-south link from Russia to the Persian Gulf. To finance the construction of these lines he introduced a tax on sugar. Here in Europe that might have little effect, but in Persia much tea was drunk and this was slurped with a sugar lump between the front teeth.

Up until the present there is much work on the railway network in the form of new lines, upgrades to high-speed stretches and electrification. Through the boycott of the past years everything has gone a bit slower than originally planned.

Visiting a Depot.

A part of the trip was a planned visit to the diesel depot at Tehran. The depot lies in the middle of the city and a visit without a permit is not possible. In order to see everything one needs to allow for at least 4 or 5 hours – in our case there was not enough time.

Directly after we arrived on the right side there stood two modern sheds with tracks, for minor maintenance. Between the sheds there is a double traverser to bring the locos from one track to any of the others. Here also small service measures are carried out such as oil, sand and water supplies. The larger maintenance takes place at another part of the large complex. The interesting depot, which makes a very modern impression, lies close to the main station in Teheran, where steam loco 51-03 stands on a plinth. The machine is one of a series of 16 built by Henschel in 1938 for Iran, numbered 51.01 – 51.16 (Henschel 24052 – 24067). At the moment investigation is under way to see if the loco can be put into working order once again.

Trans-Iranian Railway

An important line is the link from the Caspian Sea from Bandar Shah via Teheran to Bandar Shapur on the Persian Gulf. This line is 1,392km long and runs over two passes of some 2000m and a high plateau in the centre. The line was opened in 1938 and forms even today a major artery passing right through the country. Whoever looks carefully at what has been achieved will end up thinking that the lines over the Brenner or Gotthard Passes were child's play in comparison. The way the line twists and spirals can be easily seen on a map.

In order to get from the Caspian Sea to Teheran the Alborz Mountains must first be crossed. From the coast the line is not very interesting and runs through green and inhabited landscape. When the mountains begin then one feels more of southern Poland or Austria. Near the small village of Pol Sefid it begins to get really interesting; here there is a small depot that can be reached fairly easily from the road via a small bridge. In this depot there are stationed, apart from diesel locos, two interesting vehicles: a German snow plough and a four-wheel coach that was used by the former Shah. After Pol Sefid the line begins to climb before the Doab bridge is the first section where the line climbs at three levels along the mountain side. The Doab bridge is a good photographic point. From the station there is a point one can reach on foot and here one can shoot in both directions from the bridge.

Near the station Sorhabad comes the most interesting part of the line. Near the little place Veresk stands the famous Veresk Bridge. The support construction is still visible under the bridge. It was built by the Austrian engineer Walter Aigner, who lies buried here in the small local cemetery. In this way he still (so to speak) has a view of the famous bridge that he built.

At a High Level.

Once a train has passed the bridge it has to travel three times along the mountainside in order to attain the great rise in altitude. The three levels can be seen easily from the high road and there is

even a small restaurant. Here it is normal to park along the side of the highway to see this special point better. In order to reach the pass, another double-eight has to be traversed near Shourab, which means that the train 'crosses over itself' twice!

Through a tunnel the mountain station Gaduk is reached at a height of 2,136m and then the line continues over the high plateau with snow-topped mountains in the background. When you come out of the desert, the temperature at this height is quite pleasant. During the journey the mountain station formed the climatic border with rain on the Caspian Sea side and pleasant dry weather southwards.

After Firez Kooh the line descends again via a river valley. It runs through a desertified rocky landscape that gets constantly drier and acquires steadily a more desert character. One can follow the line with a normal car for one short section, but in order to follow all of it a 4-wheel-drive all-terrain vehicle would be necessary. Near Gamsar the main line to Teheran is joined.

Through the Zagros Mountains.

The night train was taken from Tehran to the south, in the direction of the Persian Gulf. On the most important night routes modern Chinese stock is employed, even with televisions in the compartments. On less important routes older material is used, which at least has air conditioning.

In the early morning we got out at a halt on the south side of the mountain, some fifty kilometres from Iraq. That sounds exciting, but it is not really. From the Persian Gulf the line climbs through the river valley through the Zagros Mountains. This is a deserted, empty and in the daytimes very hot area without any rain. The railway line is the only route and some small villages and stations can only be reached by rail. Use is made of small Draisines for local traffic; one of these is even equipped as an ambulance with a blue flashing light. During the trip we travelled for two days on a set of three draisines in order to get to the various planned photography points. There is no other way to get there.

The line has many tunnels and bridges. Considering the heavy traffic and the quite significant length of the tunnels it is not considered sensible to walk through them. Only from Doorud on the north side is there a road of some thirty kilometres into the mountains. From the road the railway line can be seen and there are many good spots for photography. The highest point of the line is reached between Doorud and Arak, to the north of the Zagros mountains. The line here runs with wide curves through a green and open landscape with snow-topped mountains in the background.

Stock.

The current motive power fleet comprises mainly diesels. Only in the north-west is there an electrified line; for this the Swedish firm ASEA delivered eight locos based on the Rc4. Most of the diesels are similar to the older type of American types. They were built by EMD and delivered in the period when there was a different political approach. In the internet one can find some limited information. There are also locos of the type formerly delivered to Yugoslavia.

The newer machines come from Alstom and are built in Iran under licence, and the Iran Runner delivered by Siemens; this is a modified version of the ER20, a type used also in Germany and Austria. The Iranian version has only a single cab and a larger cooling system due to the greater heat of 40 to 50° C in the desert. The Iran Runners are still being delivered. The first thirty examples were built in Germany, the rest are self-produced.

There are multiple unit trains from Chinese and German manufacturers. The Siemens 'Paradise' sets have a top speed of 160km/h and are derived from the Desiro. Along the highway to the airport there were posters advertising a Vectron for the Iranian railways. This fits the image, considering the plans to electrify the Tehran – Mashhad line and to operate it at a speed of 250km/h.

(b). THE IRANIAN STATE RAILWAYS.

(By Bernd Seiler. In 'Fern Express' 3/2016 pp.14-20.)

It took a long time before Iran had a railway network worthy of the name. Called Persia at the time, the country was for a long time used as a punchball by foreign powers pursuing their own political interests. Russia and England manoeuvred for a long time for influence in the country between Iraq, Turkey, Armenia, Azerbaijan, Turkmenistan, Afghanistan and the British colonial India which is now Pakistan. Between them they effectively hindered the construction of any railways. There were a few attempts, but these soon failed due to financial problems. There was only a metre-gauge line from Teheran to Ray which opened in 1888, only nine kilometres long and providing access to the mosque of Abd-al-Azim, but of no economic consequence.

It was only in the First World War, during which Russian, Turkish and British troops occupied the country, that several lines were built, including the 148km from Tabriz to Jolfa, built to the Russian 1,524mm gauge, and several military or industrial narrow gauge lines, especially in the oil producing areas or on the forests of the North. On the whole Persia remained a white space on the railway map. Only on the border to India, between Mirjaveh and Zahedan, was an extension built to the line that ran from Quetta – this to Indian gauge 1,676mm. Until 2009 this remained an isolated stretch of railway of little importance.

It was only at the end of the 1920's that the railway age began here, a period when most other states had already completed their railway networks. The ambitious Reza Shah recognised that a modern transport system was vital and he stood firm against foreign powers, who preferred an East-West link to suit their own interests, albeit they would much have preferred to prevent any railway construction at all. Reza Shah Pahlavi recognised that a dependence on foreign investment would only continue Iran's relative powerlessness and so he introduced a tax on sugar and tea, at the time State monopolies. From this tax income he financed the construction of one of the most spectacular railway lines in the world. A German-American consortium completed the first section across the plain from 1927, and then the Danish-Swedish firm Kampsax took over the mountain section from 1933, whereby numerous German, Austrian and Italian construction firms were also responsible for certain sections. Ten 2-cylinder compound 0-10-0's of the Austrian class 80 were brought by Kampsax for use on construction trains and remained in the country thereafter. The Trans-Iranian railway led from Bandar Shah (now Bandar Turkaman) on the Caspian Sea via Teheran, Ghom (Qum, Qom), Arak, Doroud, Andimeshk to Bandar Shapur (now Bandar Imam Khomeini) on the Persian Gulf. It was 1,392km long and climbed over two passes, each of over 2,000m over sea level. The entire line was handed over by Kampsax in summer 1938, ahead of schedule and below the calculated costs! One can only consider this with respect when comparing with modern construction projects.

Under Allied Administration in the 2nd. World War.

The Trans-Iranian Railway laid the foundation for the currently growing railway network of the Islamic Republic of Iran. After not even three years of peacetime operation Soviet and British troops occupied Persia in 1941, demanded the expulsion of all Germans and the abdication of the King Reza Shah. The railway line now served as the 'Persian Corridor' for supplying the Red Army with matériel and fuel. The line was not built for such levels of traffic, nor was the locomotive stock sufficient. The main Iranian fleet was formed of 49 2-8-0 locos from Krupp, Henschel and the Maschinenfabrik Esslingen and 16 2-10-0's from Henschel. In addition there were twelve Nohab 2-8-2's, not really suitable for the line, and for the long steep northern gradients from Pol-e Sefid to the summit near Gadouk station four powerful 4-8-2+2-8-4 Garratts from Beyer Peacock. When the occupiers came to the country they found only a few of the locos in good condition, mainly the Henschel 2-10-0's. Within a few months almost 150 of the LMS 8F-type 2-8-0's had been brought to the country. When the British handed over this section of the route to the Americans in 1942 these brought initially 91 of the 2-8-2 USATC-200 type locos and a little later 75 RSD-1 Diesel locos from ALCO.

Before 1941 the freight traffic had amounted to ca. 200 tons per day. The British railway troops managed to raise the daily capacity by 1942 to an average of 1,530 tons and the Americans by 1944 finally to 6,489 tons. In the Soviet-occupied Zone the German locos were mainly used as well as the four Garratts that had been overhauled by the British

troops. Here there were the steepest gradients but not as many tunnels as on the section Andimeshk – Doroud. The water supply for the steam locos was always exceedingly fragile and many watering stations had to be supplied constantly by tank wagons of water. The regular washing out of locomotive boilers was also not always possible due to the shortage of water. The water preparation was at that time not so well known as in the latter years of steam operation in Europe, and so the boilers and the smoke emission in tunnels remained an enormous problem which could only be relieved eventually by the use of the 1,000hp ALCO Diesel locos of the class RSD-1, double-headed.

Over three million tons were transported over the Trans-Iranian Railway between 1941 and 1945. Under the military occupation the only expansion carried out was that necessary for important military purposes. Amongst others, these included a line to a further port on the Persian Gulf, because the capacity at Bandar Shapur was in no way adequate.

Developments after 1945.

Work on the extensions begun under Reza Shah could only be continued after the withdrawal of the American troops in 1945. The Soviets left only much later and very reluctantly; they had planned to annex a section of Iranian territory and attach it to Azerbaijan. In the following years a link was formed to the Turkish railway network.

Here are the more important developments of the railway network:

Line	Length (km)	Constructed
Teheran – Ray (Im)	9	1886-1888.
Tabriz - Jolfa	(1524mm, now 1435mm, 1975 electrified)	148 1912-1916.
Zahedan – Mirjaveh	(1676mm) 93	1920-21
Teheran – Bandar Shah	461	1927-1937
Teheran – Bandar Shahpur	928	1927-1938
Ahvaz – Khorramshahr	121	1942-1943
Sar Bandar – Mahshahr	12	1950-1951
Garmsar – Mashhad	812	1938-1958.
Teheran – Tabriz	736	1939-1959
Gorgan – Bandar Shah	35	1960-61
Tabriz – Bazargan	192	1912-1971
Qom – Zarand	847	1939-1971
Isfahan – Zarrin Shahr	111	1969-1972
Zarand – Kerman	80	1975-1979
Bafq – Bandar Abbas	670	1982-1995
Arpin – Maleki	24	1993 – 1997
Arpin – Mohammadiya	28	1994-1999.
Chadormalu – Meibod	219	1992-1999
Bafq – Kashmar – Mashhad	756	2001-2004
Isfahan – Shiraz	506	? - 2009.
Kerman – Bam – Zahedan	545	? - 2009
Sarakhs – Mashhad (- Turkmenistan)	165	1996-2014
Khorramshahr – Shalamche (-Iraq)		16 2014.

Until now road traffic has been privileged politically. Motorways have been built, fuel is cheap and even subsidised and this makes car travel affordable for many. Lorries form the backbone of freight traffic in the country. There were fewer than 12 Million inhabitants in Iran around 1900, now it is almost 80 million. This has all led to a tremendous growth in traffic, but also to air pollution and a large number of casualties in traffic accidents. Only some 9% of traffic is currently carried by rail. Iran has therefore instituted an ambitious development programme which has, however, hit some delays due to the economic sanctions connected to the Atom programme. Expansion of the railway network had hit obstacles already with the Revolution of 1979 and then the Iraq War. However, since the 1990's investment in railways has been increased again.



Some photos from the Iran Rail expedition

Photos by Sieger de Boer.



The following lines are currently under construction:

Line	Length in Km.	Class	RAI Numbers.	Builder	Number.	Type.	Year.	KW	Top speed (km/h)
Qazvin – Rasht – Anzali / Astara (Azerbaijan)	72	1.20	20-01 – 24	Davenport LW	24	B-dm	1942.	-	-
Hamedan – Joka	75	RSD-1	-	ALCO	57	Co'Co'	1943	735	105
Malayer – Kermanshah – Khosravi	450	G12	40-01 – 136	EMD	136	Bo'Bo'	1956-62	965	100
Teheran – Qom – Isfahan (High-speed line, electrified)	424	G8	40-401 – 413	WMD	13	Bo'Bo'	1959	644	100
Nezamiye – Miyandasht	37	G16	60-301 – 320	EMD	20	Co'Co'	1959	1324	105
Miyane – Ardebil	175	G18W	40-451 – 452	2	Bo'Bo'	1968	644		105
Mahabad – Oroumiye	97	G22	40 137	EMD	1	Bo'Bo'	1968	965	105
Maraghe – Miyando Ab – Mahabad	86	GT26CW	60-501 – 569	EMD	679	Co'Co'	1970-73	2200	124
Arak – Malayer	90	HD10C	40-601 – 638	Hitachi	38	Bo'Bo'	1971-75	772	100
Shiraz – Boushehr – Asalouye	647	GT26CW	60-801 – 914	EMD	114	Co'Co'	1974, 76	2200	124
Khaf – Herat (in Afghanistan)	140	G22W	40-138 – 158.	EMD	21	Bo'Bo'	1975	1100	105
Teheran – Hamedan – Sanandaj	418	G22W	40-159 – 178	EMD /Duro Dakovic, Yugoslavia	20	Bo'Bo'	1982	1100	105
Chabahar – Zahedan – Mashhad	1,350.	GT26CW-2	60-915 – 974	EMD (GMD London, Canada)	60	Co'Co'	1984	2200	132
		C30-7	-	GE	29	Co'Co'	1985	2400	113
		LDE 626	60-351 - 360	Electroputere Craiova, (Romania)	10	Co'Co'	1986	1385	100
		LDE 2640	HP-IR -	Electroputere Craiova (Romania)	20	Co'Co'	-	1969	100
		U30C	2001 – 2021	GE (Montreal, Canada)	21	Co'Co'	1992	2205	107
		30C-7i	2022 – 2062	GE (Montreal, Canada)	41	Co'Co'	1993-94	2205	113
		AD43C	201 – 300	Alstom/Ruston	100	Co'Co'	2000-09	2600/2880	110/150
		DF8B	60-3012	CSR (China)	1	Co'Co'	2008	3680	100.
		IR22 (ER24PC)	1501-1650	Siemens	150	Bo'Bo'	2010-11	2400	160

Further major projects are still at the planning stage and are to be partly financed by private investors. In addition there are feasibility studies for, amongst other things, a coastal railway along the Persian Gulf from Ahwaz to Bandar Abbas. This would also be a major project. The State Railways have been planning since 2010 to expand the network by 2025 from some 11,000km to 25,000km. It is only in China that one encounters elsewhere such a boom in railway building.

The first high-speed line between the cities of Teheran and Isfahan, each with millions of inhabitants, is currently under construction, but the doubling of the line Teheran – Mashhad, which has been desired for some time, has not been forgotten. Here electrification has also been long planned, though there are also plans for a further high-speed line. It is only when Iran is able to export oil once again unhindered by any sanctions, and the oil price has stabilised, that the financing of such a line will become possible – 850km laid out for 250km/h; but at present there is a shortage of many things that one cannot import. Many construction projects have been delayed or have even been totally suspended for a while. So the line to Azerbaijan, Qazvin – Rasht – Astara should actually have gone into service in 2011. The sanctions are painful for Iran's economy and especially for its citizens. Whether they will lead to a change in political thinking remains an open question, when one considers the similar sanctions against Cuba and the latest EU attempt to influence Russia.

The Locomotive Fleet.

The electrification plans were also put on ice following the trade embargo, although in 2009 already contracts had been signed for the electrification of the line Teheran – Mashhad and the delivery of 70 electric locomotives. As a consequence the line Tabriz – Jolfa with its eight ASEA locomotives, based on the Swedish type Rc4, the only (25kV/50Hz) electrified section of the State Railways, if one ignores the newly constructed Metro lines in Teheran or Isfahan. China delivered between 1997 and 2010 over 40 electric multiple units (classes TM1 to TM3) for the Teheran Metro.

As a result it is Diesels which dominate Iran's railways, albeit heavy oil is burned instead of Diesel. In spite of some new arrivals the diesel fleet is rather conservative. The most important types are (according to year of construction):

There are or were also some second-hand Romanian 060DA's, five 2M62's from the Ukraine and a Chinese diesel locomotive in Iran, but these play hardly any role in traffic operations.

Whilst regional trains are often formed of second-hand Danish or German carriages, the express trains are often formed of modern multiple-units. Siemens has provided the 160km/h 'Paradise' DH4-1 unit, of which only the first twenty were built by Siemens itself, others in Iran through a technology transfer. The same applies to the 'Iran Runner' 160km/h double diesel loco, with which the State Railways are very satisfied.

Hyundai Rotem delivered 150 diesel railcars between 2007 and 2009. The railway had no luck with the acquisition of second-hand class 141 diesel railcars from Britain, and now these are to be found only stored out of use. More significant are the four French RTG Turbotrain sets, delivered from 1976, which were converted to Diesel traction in 2008. In 2015 only one of these was to be seen, hauled by a Siemens Euro Runner. With these units the travel speed on the line from Teheran to Mashhad had been raised to 160km/h - with classic permanent way and timber sleepers, screwed-down rails and hand-operated points.

The Iranian Railways will develop very quickly once the income from oil and gas exports is available once again. There is only one section of line, from Garmsar – Sari, i.e. the northern side of the Transiranian Railways, that is still fitted with semaphore signals. Many lines are to be doubled in the near future. The electrification of the line to Mashhad seems to be only a matter of time. With this, new locos will arrive and the older existing Diesels will be replaced. With the new lines there will come new rolling stock, which will change the current image of classic American-style diesel locos on their established routes and make these rarer.

Unfortunately the country is not as open as one would wish; photography on the railways is still very difficult if not impossible. Photographic permits are not issued when applied for. But one can at least already travel through the picturesque lines in the few daylight trains. The railway is amazingly punctual and also relatively fast. This gives it an enormous advantage over the congested road traffic – which travellers have also learned to value. Many interregional trains are booked out days in advance. The purchase of tickets on the internet requires a mastery of the language. It is therefore not really easy to travel in this interesting and culturally-fascinating country as one is accustomed in Europe. Iran will therefore remain for a while an exotic and almost unattainable country for travellers."

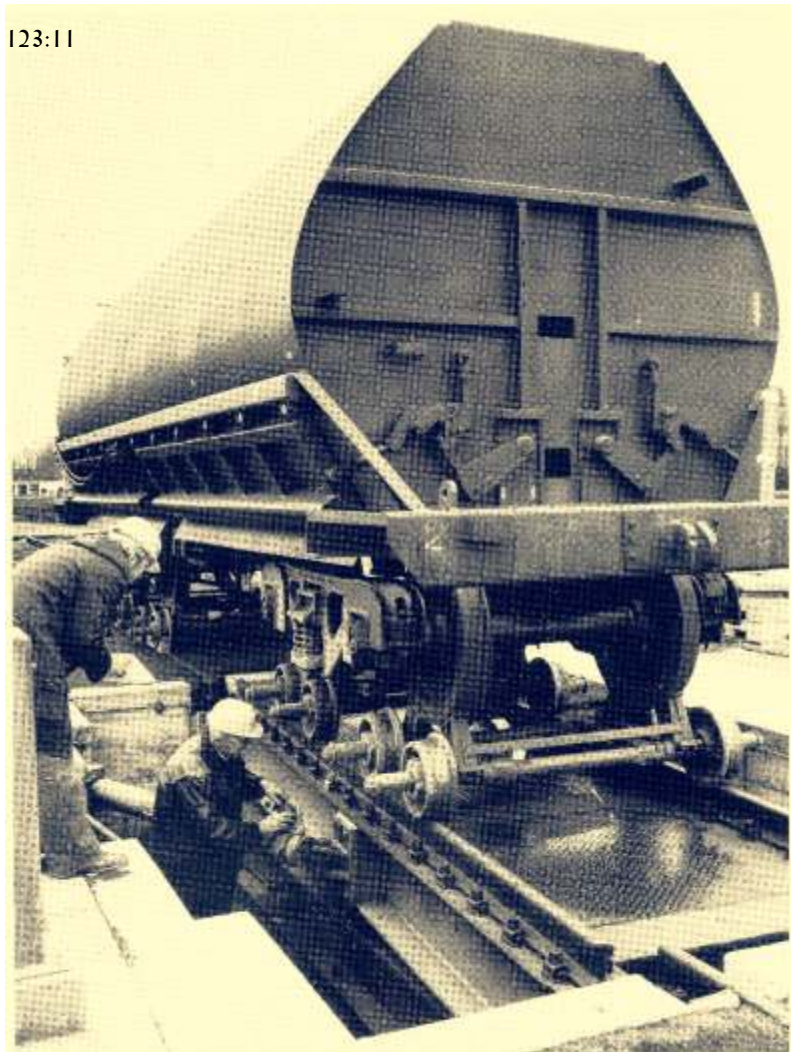
**The
Junction
for the
Carmiel
Line.
Towards
Akko.**



***Approaching Akko, view from the cab of the junction for the new Carmiel line at km. 17 from Haifa East, 4km south of Akko, adjacent to the Kiryat Haplada steel complex.
Photos by Aharon Gazit, July 2018.***

Need title for this photo

123:11



Jordanischer Güterwagen beim Test im Bundesbahn Zentralamt in Minden (W.).
Foto: DB/Krieger

123:12



- View at Merkazit Ha-Mifratz shows the planned cable car location on 04.10.2018; on the top of the mountain in the middle of the picture and left of the two high buildings can be seen the Haifa University (high thin building), while at a lower level, partially obstructed by the high voltage column can be seen one of the Technion - Haifa's higher technical institute; both institutes will be linked by the cable car with the transportation centre.
- (Photo:
- Aharon Gazit)

Tel Aviv Central station at night with the new northern exit to Yaacov Dori street. (Photo Vadim Kostirev).

