UNECE

European Agreement on Main International Railway Lines (AGC)





ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

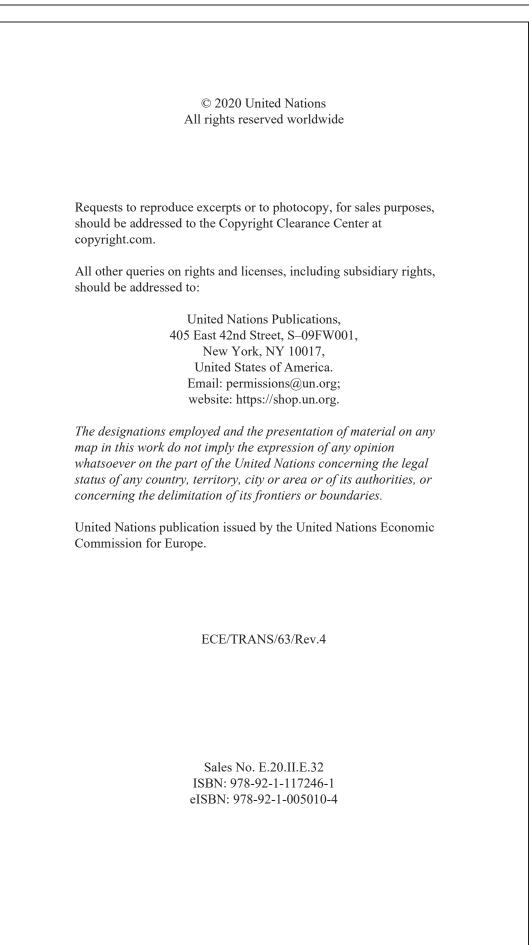
European Agreement on Main International Railway Lines (AGC)

Done at Geneva on 31 May 1985

Revision 4



UNITED NATIONS Geneva, 2020



United Nations Economic Commission for Europe

The United Nations Economic Commission for Europe (UNECE) is one of the five United Nations regional commissions, administered by the Economic and Social Council (ECOSOC). It was established in 1947 with the mandate to help rebuild post-war Europe, develop economic activity and strengthen economic relations among European countries, and between Europe and the rest of the world. During the Cold War, UNECE served as a unique forum for economic dialogue and cooperation between East and West. Despite the complexity of this period, significant achievements were made, with consensus reached on numerous harmonization and standardization agreements.

In the post-Cold War era, UNECE acquired not only many new member States, but also new functions. Since the early 1990s the organization has focused on assisting the countries of Central and Eastern Europe, Caucasus and Central Asia with their transition process and their integration into the global economy.

Today, UNECE supports its 56 member States in Europe, Central Asia and North America in the implementation of the 2030 Agenda for Sustainable Development with its Sustainable Development Goals (SDGs). UNECE provides a multilateral platform for policy dialogue, the development of international legal instruments, norms and standards, the exchange of best practices and economic and technical expertise, as well as technical cooperation for countries with economies in transition.

Offering practical tools to improve people's everyday lives in the areas of environment, transport, trade, statistics, energy, forestry, housing, and land management, many of the norms, standards and conventions developed in UNECE are used worldwide, and a number of countries from outside the region participate in UNECE's work.

UNECE's multisectoral approach helps countries to tackle the interconnected challenges of sustainable development in an integrated manner, with a transboundary focus that helps devise solutions to shared challenges. With its unique convening power, UNECE fosters cooperation among all stakeholders at the country and regional levels.

Transport in UNECE

The UNECE Sustainable Transport Division is the secretariat of the Inland Transport Committee (ITC) and the ECOSOC Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals. The ITC and its 17 working parties, as well as the ECOSOC Committee and its subcommittees are intergovernmental decision-making bodies that work to improve the daily lives of people and businesses around the world, in measurable ways and with concrete actions, to enhance traffic safety, environmental performance, energy efficiency and the competitiveness of the transport sector.

The ECOSOC Committee was set up in 1953 by the Secretary-General of the United Nations at the request of the Economic and Social Council to elaborate recommendations on the transport of dangerous goods. Its mandate was extended to the global (multi-sectoral) harmonization of systems of classification and labelling of chemicals in 1999. It is composed of experts from countries which possess the relevant expertise and experience in the international trade and transport of dangerous goods and chemicals. Its membership is restricted in order to reflect a proper geographical balance between all regions of the world and to ensure adequate participation of developing countries. Although the Committee is a subsidiary body of ECOSOC, the Secretary-General decided in 1963 that the secretariat services would be provided by the UNECE Transport Division.

ITC is a unique intergovernmental forum that was set up in 1947 to support the reconstruction of transport connections in post-war Europe. Over the years, it has specialized in facilitating the harmonized and sustainable development of inland modes of transport. The main results of this persevering and ongoing work are reflected, among other things, (i) in 58 United Nations conventions and many more technical regulations, which are updated on a regular basis and provide an international legal framework for the sustainable development of national and international road, rail, inland water and intermodal transport, including the transport of dangerous goods, as well as the construction and inspection of road motor vehicles; (ii) in the Trans-European North-south Motorway, Trans-European Railway and the Euro-Asia Transport Links projects, that facilitate multi-country coordination of transport infrastructure investment programmes; (iii) in the TIR system, which is a global customs transit facilitation solution; (iv) in the tool called For Future Inland Transport Systems (ForFITS), which can assist national and local governments to monitor carbon dioxide (CO_2) emissions coming from inland transport modes and to select and design climate change mitigation policies, based on their impact and adapted to local conditions; (v) in transport statistics - methods and data - that are internationally agreed on; (vi) in studies and reports that help transport policy development by addressing timely issues, based on cutting-edge research and analysis. ITC also devotes special attention to Intelligent Transport Services (ITS), sustainable urban mobility and city logistics, as well as to increasing the resilience of transport networks and services in response to climate change adaptation and security challenges.

In addition, the UNECE Sustainable Transport and Environment Divisions, together with the World Health Organization (WHO) – Europe, co-service the Transport Health and Environment Pan-European Programme (THE PEP).

Finally, as of 2015, the UNECE Sustainable Transport Division is providing the secretariat services for the Secretary General's Special Envoy for Road Safety, Mr. Jean Todt.

Note:

This document contains the text of the AGC Agreement, including the amendments to the AGC Agreement contained in the following Depositary Notifications:

- (a) Depositary Notification C.N.34.1992.TREATIES-1 of 30 March 1992;
- (b) Depositary Notification C.N.220.199.TREATIES-2 of 20 July 1994;
- (c) Depositary Notification C.N.123.1996.TREATIES-1 of 28 May 1996;
- (d) Depositary Notification C.N.166.1997.TREATIES-1 of 2 May 1997;
- (e) Depositary Notification C.N.68.2000.TREATIES-1 of 10 February 2000;
- (f) Depositary Notification C.N.255.2001.TREATIES-1 of 28 March 2001 and C.N.826.2001.TREATIES-3 of 1 October 2001 (Acceptance);
- (g) Depositary Notification C.N.202.2003.TREATIES-1 of 4 March 2003 and C.N.914.2003.TREATIES-2 of 4 September 2003 (Acceptance);
- (h) Depositary Notification C.N.140.2005.TREATIES-1 of 28 February 2005 and C.N.669.2005.TREATIES-2 of 29 August 2005 (Acceptance);
- Depositary Notification C.N.650.2006.TREATIES-2 of 9 August 2006 and C.N.194.2007.TREATIES-1 of 12 February 2007 (Acceptance);
- (j) Depository Notification C.N.532.2007.TREATIES-1 of 3 May 2007 and C.N.1050.2007.TREATIES-3 of 5 November 2007 (Acceptance);
- (k) Depository Notification C.N.711.2010.TREATIES-1 of 30 December 2010 and C.N.528.2011.TREATIES-1 of 25 August 2011 (Acceptance);
- Depository Notification C.N.69.2018.TREATIES-XI.C.3 of 6 February 2018 and C.N.380.2018.TREATIES-XI.C.3 of 14 August 2018 (Acceptance);
- (m) Depository Notification C.N.140.2019.TREATIES-XI.C.3 of 17 April 2019 and C.N.559.2019.TREATIES-XI.C.3 of 22 October 2019 (Acceptance).

The present document contains in a single, non-official, document the consolidated text of the AGC Agreement including the basic instrument, its amendments and corrections that have come into force by the dates indicated. Only the text kept in custody by the Secretary General of the United Nations, in his capacity as depositary of the AGC Agreement, constitutes the authoritative text of the AGC Agreement.

European Agreement on Main International Railway Lines (AGC)

The contracting parties,

Conscious of the need to facilitate and develop international railway traffic in Europe,

Considering that, in order to strengthen relations between European countries, it is essential to lay down a co-ordinated plan for the development and construction of railway lines adjusted to the requirements of future international traffic,

Have agreed as follows:

Article 1

d The Contracting Parties adopt the proposed railway network hereinafter referred to as the "International E-railway network" and described in annex I to this Agreement, as a co-ordinated plan for the development and construction of railway lines of major international importance which they intend to undertake within the framework of national programmes in accordance with their respective legislations.

Article 2

The international E-railway network consists of a system of main lines and supplementary lines. The main lines are the "major railway axes" already carrying very heavy international traffic or traffic expected to become very heavy in the near future; the supplementary lines are those which, while already completing the network of main lines, will carry very heavy international rail traffic only in the more distant future.

Article 3

The international E-railway network of main lines referred to in article 2 conforms to the characteristics set out in annex II to this Agreement or will be brought into conformity with the provisions of this annex in future improvement work to be carried out in conformity with national programmes.

Article 4

The Secretary-General of the United Nations shall be the depositary of this Agreement.

Article 5

1. This Agreement shall be open at Geneva for signature by States which are either members of the United Nations Economic Commission for Europe or have been admitted to the Commission in a consultative capacity in conformity with paragraph 8 of the terms of reference of the Commission, from 1 September 1985 to 1 September 1986.

2. Those States may become Parties to this Agreement by

(a) Signature, followed by ratification, acceptance or approval; or

(b) Accession.

3. Ratification, acceptance, approval or accession shall be effected by the deposit of an instrument in good and due form with the Secretary-General of the United Nations.

Definition and adoption of the International E-railway network

Construction and development of lines of the international E-railway network

Designation of

the depositary

Procedure for the signature of, and for becoming Party to, the Agreement

Article 6

This Agreement shall enter into force 90 days after the date of Entry into force 1. of the Agreement the deposit of the instrument of ratification, acceptance, approval or accession, provided that one or more lines of the international Erailway network link, in a continuous manner, the territories of at least four of the States which have deposited such an instrument. If this condition is not fulfilled, the Agreement shall enter into force 90 days after the date of the deposit of the instrument of ratification, acceptance, approval or accession, whereby the said condition will be satisfied. 2. For each State which deposits an instrument of ratification, acceptance, approval or accession after the commencement of the period of 90 days specified in paragraph 1 of this article, the Agreement shall enter into force 90 days after the date of deposit of the said instrument.

Article 7

Limits to the application of the Agreement of the Agreement of the Agreement of the situation, as it considers necessary for its external or internal security. Such measures, which must be temporary, shall be notified immediately to the depositary and their nature specified.

Article 8

Settlement of disputes 1. Any dispute between two or more Contracting Parties which relates to the interpretation or application of this Agreement and which the Parties in dispute are unable to settle by negotiation or other means shall be referred to arbitration if any of the Contracting Parties in dispute so requests and shall, to that end, be submitted to one or more arbitrators selected by mutual agreement between the Parties in dispute. If the Parties in dispute fail to agree on the choice of an arbitrator or arbitrators within three months after the request for arbitration, any of those Parties may request the Secretary-General of the United Nations to appoint a single arbitrator to whom the dispute shall be submitted for decision.

2. The award of the arbitrator or arbitrators appointed in accordance with paragraph 1 of this article shall be binding upon the Contracting Parties in dispute.

Article 9

Any State may, at the time of signing this Agreement or of depositing its instrument of ratification, acceptance, approval or accession, declare that it does not consider itself bound by article 8 of this Agreement.

Declaration concerning article 8

Article 10

Procedure for amending the main text

1. The main text of this Agreement may be amended by either of the procedures specified in this article.

Upon the request of a Contracting Party, any 2 (a) amendment proposed by it to the main text of this Agreement shall be considered by the Working Party on Rail Transport of the Economic Commission for Europe.

If it is adopted by a two-thirds majority of the members (b) present and voting and if this majority includes a two-thirds majority of the Contracting Parties present and voting, the amendment shall be communicated by the Secretary-General to all Contracting Parties for acceptance.

If the amendment is accepted by two thirds of the (c) Contracting Parties, the Secretary-General shall so notify all the Contracting Parties and the amendment shall enter into force 12 months after the date of such notification. The amendment shall enter into force with respect to all the Contracting Parties except those which, before its entry into force, make a declaration that they do not accept the amendment.

3. At the request of at least one third of the Contracting Parties, a conference, to which the States referred to in article 5 shall be invited, shall be convened by the Secretary-General. The procedure specified in paragraph 2, subparagraphs (a) and (b), of this article shall be applied in respect of any amendment submitted to the consideration of such a conference

Article 11

Procedure for 1. Annex I to this Agreement may be amended in accordance with the procedure specified in this article.

> At the request of a Contracting Party, any amendment proposed by it to annex I to this Agreement shall be considered by the Working Party on Rail Transport of the Economic Commission for Europe.

> If it is adopted by the majority of the members present and 3. voting and if this majority includes the majority of the Contracting Parties present and voting, the amendment shall be communicated by the Secretary-General to the competent administrations of the Contracting Parties directly concerned. The following shall be considered Contracting Parties directly concerned:

> In the case of inclusion of a new main line or (a) modification of an existing main line, any Contracting Party whose territory is crossed by that line;

> In the case of inclusion of a new supplementary line or (b)modification of an existing supplementary line, any Contracting Party contiguous to the requesting country, whose territory is crossed by the principal international line or lines with which the supplementary line, whether new or to be modified, is connected. Two Contracting Parties having in their respective territories the terminal points of a proposed ferry service on the principal line or lines specified above shall also be considered contiguous for the purposes of this paragraph.

> Any proposed amendment communicated in accordance with paragraph 3 of this article shall be accepted if, within a period of six months following the date of its communication, none of the competent administrations of the Contracting Parties directly concerned notifies the Secretary-General of its objection to the amendment. If the administration of a Contracting Party states that its national law obliges it to subordinate its agreement to the grant of a specific authorization or to the approval of a legislative body, the

amending annex I

competent administration shall not be considered as having consented to the amendment to annex I to this Agreement, and the proposed amendment shall not be accepted until such time as the said competent administration notifies the Secretary-General that it has obtained the required authorization or approval. If such notification is not made within a period of 18 months following the date on which the proposed amendment was communicated to the said competent administration or if, within the period of six months specified above, the competent administration of a Contracting Party directly concerned expresses an objection to the proposed amendment, that amendment shall be deemed not accepted.

Any amendment accepted shall be communicated by the 5 Secretary-General to all the Contracting Parties and shall enter into force for all the Contracting Parties three months after the date of its notification.

Article 12

1. Annex II to this agreement may be amended by the procedure specified in this article.

2. At the request of a Contracting Party, any amendment proposed by it to annex II to this Agreement shall be considered by the Working Party on Rail Transport of the Economic Commission for Europe.

3. If it is adopted by the majority of the members present and voting, and if this majority includes the majority of the Contracting Parties present and voting, the amendment shall be communicated by the Secretary-General to the competent administrations of all the Contracting Parties for acceptance.

The amendment shall be accepted if, within a period of 4 six months following the date of notification, less than one third of the competent administrations of the Contracting Parties notify the Secretary-General of their objection to the amendment.

5. Any amendment accepted shall be communicated by the Secretary-General to all the Contracting Parties and shall come into force three months after the date of its notification.

Article 13

Each State shall, at the time of signing, ratifying, accepting, approving or acceding to this Agreement, inform the Secretary-General of the name and address of its administration to which proposed amendments to the annexes to this Agreement are to be communicated in conformity with articles 11 and 12 above.

Any Contracting Party may denounce this Agreement by written notification addressed to the Secretary-General. The denunciation shall take effect one year after the date of receipt by the Secretary-General of such notification.

Article 15

The application of this Agreement shall be suspended if the number of Contracting Parties is less than eight for any period of 12 consecutive months.

Notification of the address of the administration to which proposed amendments to the annexes to the Agreement are to be communicated

Procedure for

amending

annex II

Article 14

Denunciation and suspension of the validity of the Agreement

In witness whereof, the plenipotentiaries, being duly authorized thereto, have signed this Agreement.

Done at Geneva, this thirty-first day of May one thousand nine hundred and eighty-five, in a single copy in the English, French and Russian languages, the three texts being equally authentic.

Annex I

Railway lines of major international importance

Numbering of lines of major international importance

1. *Principal lines*, comprising reference lines and intermediate lines, called class-A lines, have two-digit numbers; *supplementary lines*, called class-B lines, have three-digit numbers.

2. North-south oriented reference lines have two-digit odd numbers ending in 5 and increasing from west to east. West-east oriented reference lines have two-digit even numbers ending in 0 and increasing from north to south. Intermediate lines have respectively two-digit odd and two-digit even numbers falling within the numbers of the reference lines between which they are located.

3. Class-B lines have three-digit numbers, the first digit being that of the nearest reference line to the north of the B-line concerned, the second being that of the nearest reference line to the west of the B-line concerned and the third being a serial number.

List of railway lines

I. Numbering of lines at the European level

North-South

- E 03 Glasgow Stranraer Larne Belfast Dublin Holyhead Crewe London Folkestone Dover
- E 05 <u>Lisboa Coimbra</u> Pampilhosa Vilar Formoso Fuentes de Oñoro Medina del Campo Burgos Irún — Bordeaux — <u>Orléans (Les Aubrais)</u> — Paris
 - Vendôme —
- E 07 Paris Orléans (Les Aubrais) Vendôme — Bordeaux — Hendaye — Irún — Burgos — <u>Avila</u> Aranda de Duero — Madrid
- E 09 Paris Lille Calais
- E 051 Calais Paris
- E 053 Madrid Córdoba Bobadilla Algeciras
- E 15 Amsterdam Den Haag Rotterdam Roosendaal Antwerpen Bruxelles Quévy Feignies Aulnoye — Paris — <u>Dijon</u> — Lyon — Avignon — Tarascon — Marseille
- E 23 Dunkerque Aulnoye Thionville Metz Frouard Toul Culmont Chalindrey Dijon Vallorbe Lausanne Brig
- E 25 Bruxelles Arlon Sterpenich Kleinbettingen Luxembourg Bettembourg Thionville Metz — Strasbourg — Mulhouse — Basel — Olten — Bern — Brig — Domodossola — Rho — Milano — Genova
- E 27 Liège Gouvy Troisvierges Luxembourg
- E 35 Amsterdam Utrecht Arnhem Emmerich Duisbourg Düsseldorf Köln Mainz Mannheim — Karlsruhe — Basel — Olten — Chiasso — Milano — Bologna — Firenze — Roma — Napoli — Salerno — Messina
- E 391 Dnipropetrovsk Lozovaya Krasny Liman Kharkov
- E 43 Köln Limburg Frankfurt (Main) <u>Heidelberg</u> Stuttgart Ulm Augsburg München Freilassing Salzburg
- E 45 Oslo Kornsjø Göteborg Helsingborg Malmö København Odense Fredericia Padborg — Flensburg — Hamburg — Hannover — Würzburg — Nürnberg — Ingolstadt — München — Kufstein — Wörgl — Innsbruck — Brennero — Verona — Bologna — Ancona — Foggia — Bari
- E 451 Nyköbing Gedser Rostock Berlin Halle Leipzig — Erfurt — Nürnberg — Passau (— Wels)
- E 53 Helsingborg Hässleholm
- E 55 Stockholm Hässleholm Malmö Trelleborg Sassnitz Hafen Stralsund Berlin/Seddin Dresden Bad Schandau Dečin Praha

Linz — Salsburg — Schwarzach St. Veit — Villach — Arnoldstein — Tarvisio — Udine — Venezia — Bologna

- E 551 Praha Horní Dvořiště Summerau Linz Selzthal St. Michael
- E 59 Malmö Ystad Świnoujście Szczecin Poznan Wroclaw Opole Chalupki
- E 593 Yasinovataya Kvashino Uspenskaya Rostov na Donu
- E 595 Samur Yalama Baku
- E 597 Makat Beyneu Kungrad Nukus Dashowuz Urganch Charzhev

- E 61 Stockholm Hässleholm Malmö Trelleborg Sassnitz Hafen Stralsund Berlin Dresden Bad Schandau — Děčin — Praha — Kolin — Česka Třebová — Brno — Břeclav — Kúty — Bratislava
- E 63 Žilina <u>Leopoldov</u> Bratislava (— Vienna Sopron)
- E 65 Gdynia Gdánsk Warszawa Katowice Zebrzydowice Petrovice u Karviné Ostrava Břeclav
 Bernhardsthal Wien Semmering Bruck a.d. Mur Klagenfurt Villach Rosenbach —
 Jesenice Ljubljana Ilirska Bistrica Šapjane Rijeka
- E 67 Bruck a.d. Mur Graz Spielfeld Strass Šentilj Maribor Zidani Most
- E 69 Budapest Murakeresztúr Kotoriba Čakovec Središče Pragersko Zidani Most Ljubljana — Divača — Koper
- E 691 Murakeresztúr Gyékényes
- E 693 Gyumri Yerevan Hrazdan Dilijan Ijevan Ghazakh Barkhudarli
- E 695 Bukhara Karshi Termiz Galaba (— Hairaton)
- E 71 Budapest Dombóvár Gyékényes Botovo Koprivnica Zagreb Karlovac Oštarije Rijeka
- E 73 Ormož Murska Sobota Puconci Hodoš Bajánsenye Zalaegerszeg Boba Veszprém Székesfehérvár
- E 75 Warszawa Białystok Sokółka Suwalki Trakiszki Mockava Šeštokai Kaunas Šiauliai — Šarkiai — (Meitene —) Jelgava — Rīga — Lugaži — (Valga —) Tartu — Tapa — Tallin
- E 751 Zagreb Sunja Volinja Dobrljin Bihac Ripač Strmica Knín Split
- E 753 Zagreb Karlovac Oštarije Gospić Knín Zadar
- E 771 Subotica Bogojevo Erdut Vinkovci Strizivojna Vrpolje Slvonski Šamac Bosanski Šamac — Sarajevo — Čapljina — Metković — Ploče
- E 773 (Magyařboly —) Beli Manastir Osijek Strizivojna Vrpolje
- E 79 Beograd Bar
- E 85 Budapest Kelebia Subotica Beograd <u>Niš Prešovo Tabanovci</u> Skopje Gevgelia — Idomeni — Thessaloniki — Athinai
- E 851 Lvov Vadul Siret Vicşani Paşcani
- E 853 Larissa Volos
- E 855 Sofia Kulata Promachon Thessaloniki
- E 95 Moskva Bryansk Suzemka Zernovo Khutor Mikhilovsky Kiev Razdelnaya Kuchurgan — Bender — Chisinau — Ungeny — Iasi — Pascani — Buzau — Ploiesti — Bucuresti — Videle — Giurgiu — Ruse — Gorna — Dimitrovgrad
- E 951 Sindel Karnobat
- E 97 Samsun Kalin Malatya <u>Yenice Mersin</u> Iskenderun
- E 99 Ryazan Kochetovka I Gryazi Rostov na Donu Krasnodar <u>Veseloe Gantiadi Poti</u> Novorossisk

West-East

- E 10 Oostende Bruxelles Liège Aachen Köln Düsseldorf Dortmund Münster Osnabrück — Bremen — Hamburg — Lübeck — Hanko — Helsinki — Riihimäki — Kouvola — Vainikkala — Luzhaika — St. Petersburg — Moskva
- E 12 <u>Ventspils</u> Jelgava Krustpils Rēzekne Posinj Sebezh Novosokoľniki Moskva
- E 14 Riga Krustpils Radviliskis — Obeliai — Daugavpils — Indra — Bigosovo — Polak — Vicebsk

- E 16 London Harwich Hoek Van Holland Rotterdam Utrecht
- E 18 Hamburg Büchen Berlin
- E 20 Oostende Bruxelles Liège Aachen Köln Duisburg Dortmund Hannover Helmstedt — Marienborn — Berlin/Seddin — Frankfurt (O) — Kunowice — Poznan — Warszawa — Terespol — Brest — Minsk — Asinowka — Krasnoe — Smolensk — Moskva — Nizhny Novgorod — Perm — Sverdlovsk^{*} — <u>Tyumen</u> <u>Kurgan — Petropavlovsk</u> — Omsk — Novosibirsk — Krasnoyarsk — Irkutsk — Vladivostok
- E 20/3 <u>Kaliningrad Cherniakhovsk Nesterov Kybartai Kaunas</u> Mukran – Sassnitz – Draugyste – Klaipėda – Radviliškis Maladzečna – Minsk
- E 22 Zeebrugge Brugge
- E 24 Moskva Ryazan Ruzaevka Samara Ufa Chelyabinsk Kurgan Presnogorkovskaya Kökshetaú Aqmola Mointy Druzhba Alashankou
- E 30 Karlsruhe Stuttgart Nürnberg Plauen Dresden Görlitz Zgorzelec Wroclaw Katowice — Krakow — Przemysl — Medyka — Mostiska — Lvov — Kiev — Kharkiv — Kupyansk — Topoli — Solovei Valuiki — Samara — Orenburg — Iletsk I — Kandagach
- E 32 Frankfurt (M) Hanau Erfurt Leipzig Dresden
- E 40 Le Havre Paris Lérouville Onville Metz Rémilly Forbach Saarbrücken Ludwigshafen — Mannheim — Frankfurt (M) — Gemünden — Nürnberg — Schirnding — Cheb — Plzeň — Praha — Kolin — Ostrava — Mosty u Jablunkova — Čadca — Zilina
- E 42 Paris Lérouville Nancy Sarrebourg Réding Strasbourg Kehl Appenweier Karlsruhe — Stuttgart
- E 46 Mainz Frankfurt (M)
- E 50 Paris Dijon Le Creusot — Culoz — Genève — Lausanne — Bern — Zürich — Buchs — Innsbruck — Wörgl — <u>Kufstein (Rosenheim – Freilassing)</u> — Salzburg — Linz — Wien — Hegyeshalom — Budapest —

Schwarzach St.Veit Dialoung Linz With Hogy control Duapert Miskolc — Nyiregyhaza — Zahony — Čop — Lvov — Fastov — Dnipropetrovsk — Krasnoarmeisk — Yasinovataya — Debaltsevo — Krasnaya Mogila — Gukovo — Likhaya — Volgograd — Astrakhan —

Aksaraiskaya II — Atyraŭ — Makat — Kandagach — Arys — Almaty — Aqtogai

- E 502 Bischofshofen Selzthal
- E 52 Bratislava Galanta Nové Zámky Stùrovo Szob Budapest Cegléd Szolnok Debrecen — Nyiregyhaza
- E 54 Arad Deva Teius Vinatori Brasov Bucuresti
- E 56 Budapest Rakos Ujszasz Szolnok Lőkösháza Curtici Arad Timisoara Craiova Bucuresti
- E 560 Buzáu Galati Giurgiulesti Reni Etulia Greceni Bolgrad Taraclia Basarabeasca Carabuteni Cimislia Bender
- E 562 Bucuresti Costanta
- E 592 Beineu Shetpe Aqtau
- E 60 <u>Poti</u> Batumi — Tbilisi — Gardabani — Beyuk — Kyasik — Baku — Turkmenbashi — Ashgabat — Chardzhev — Alat — Bukhara — Tashkent — Salar — Chengeldy — Arys
- E 66 Beograd Vršac Stamora Moravita Timisoara
- E 660 Ruse Kaspican
- E 680 Sofia Mezdra Gorna Kaspican Sindel Varna
- E 692 Cetinkaya Kars <u>Akhalkalaki</u> Dogu Kapi — Akhuryan — Gyumri — Ayrum — Sadakhlo — Tbilisi

^{*} Yekaterinburg.

- E 694 Gyumri Artashat Nakhichevkan Dzhulfa Karchivan Meghri Agbent Bartaz <u>Baku</u> Astara
- E 696 Tashkent Khavast Andizhan (— Osh)
- E 70 Paris Dijon Le Creusot — Mâcon — Ambérieu — Culoz — Modane — Torino — Rho — Milano — Verona — Trieste — Villa Opicina — Sežana — Ljubljana — Zidani Most — Dobova — Savski Marof — Zagreb — Strizivojna Vrpolje — Vinkovci — Tovarnik — Šid — Beograd — Niš — Dimitrovgrad — Dragoman — Sofija — Plovdiv — Dimitrovgrad — Svilengrad — Kapikule — Istanbul — Haydarpaşa — Ankara — Kapiköj [— Razi(Iran,Islamic Republic of)] Nusajbin [— Kamichli (Syrian Arab Republic)]
- E 700 Lyon Ambérieu
- E 702 Središče Čakovec Varaždin Koprívnica Osijek Erdut Bogojevo
- E 72 Torino Genova
- E 720 Plovdiv Zimnitza Karnobat Burgas
- E 74 Eskisehir Kütahya Balikser Bandirma
- E 90 Lisboa Entrocamento Valencia de Alcántara Madrid Barcelona Port Bou Cerbère Narbonne Tarascon Marseille Menton Ventimiglia Genova Pisa Livorno Roma

II. Numbering of lines at the national level*

(1) Portugal

E 05	(Fuentes de Oñoro —) Vilar Formoso — Pampilhosa —	Coimbra — Lisboa
	(ruentes de Onoro —) vitar ronnoso — rampiniosa —	Porto

E 90 Lisboa — Entroncamento — Marvao (— Valencia de Alcántara)

(2) Spain

- E 05 (Hendaye —) Irún Burgos Medina del Campo Fuentes de Oñoro (— Vilar Formoso)
- E 07 (Hendaye —) Irún Burgos Avila Aranda de Duero — Madrid
- E 053 Madrid Córdoba Bobadilla Algeciras
- E 90 (Marvao —) Valencia de Alcántara Madrid Barcelona Port Bou (— Cerbère)

(3) Ireland

E 03 (Larne — Belfast —) Dublin (— Holyhead)

(4) United Kingdom

- E 03 Glasgow Stranraer Larne Belfast (— Dublin) Holyhead Crewe London Folkestone Dover
- E 16 London Harwich (— Hoek Van Holland)

(5) France

E 05	Paris — <u>Orléans (Les Aubrais)</u> — Bordeaux — Hendaye (— Irún) Vendôme
E 051	Calais — Paris
E 07	Paris — <u>Orléans (Les Aubrais)</u> — Bordeaux — Hendaye (— Irún) Vendôme
E 09	Paris — Lille — Calais
E 15	(Quévy —) Feignies — Aulnoye — Paris — <u>Dijon</u> <u>Le Creusot</u> — Lyon — Avignon — Tarascon — Marseille
E 23	Dunkerque — Aulnoye — Thionville — Metz — Frouard — Toul — Culmont — Chalindrey — Dijon (—Vallorbe)
E 25	(Bettembourg —) Thionville — Metz — Strasbourg — Mulhouse (— Basel)
E 40	Le Havre — Paris — Lérouville — Onville — Metz — Rémilly — Forbach (— Saarbrücken)
E 42	Paris — Lérouville — Nancy — Réding — Strasbourg (— Kehl)
E 50	Paris — <u>Dijon</u> Le Creusot — Culoz (— Genève)
E 70	Paris — <u>Dijon</u> Le Creusot — Mâcon — Ambérieu — Culoz — Modane (— Torino)
E 700	Lyon — Ambérieu
E 90	(Port Bou —) Cerbère — Narbonne — Tarascon — Marseille — Menton (— Ventimiglia)
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^{*} In the list of towns given below, it should be noted that the stations shown in brackets are located on other routes or outside the country concerned.

(6) Netherlands

- E 15 Amsterdam Den Haag Rotterdam Roosendaal (— Antwerpen)
- E 35 Amsterdam Utrecht Arnhem (— Emmerich)
- E 16 (Harwich —) Hoek Van Holland Rotterdam Utrecht

(7) Belgium

- E 10 Oostende Bruxelles Liège (— Aachen)
- E 15 (Roosendaal —) Antwerpen Bruxelles Quévy (— Feignies)
- E 25 Bruxelles Arlon Sterpenich (— Kleinbettingen)
- E 27 Liège Gouvy (— Troisvierges)
- E 20 Oostende Bruxelles Liège (— Aachen)
- E 22 Zeebrugge Brugge

(8) Luxembourg

E 25	(Sterpenich) Kleinbettingen —	Luxembourg -	Bettembourg (-	 Thionville)
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E 27 (Gouvy —) Troisvierges — Luxembourg

(9) Germany

- E 10 (Liège —) Aachen Köln Düsseldorf Dortmund Münster Osnabrück Bremen Hamburg — Lübeck (— Hanko)
- E 18 Hamburg Büchen Berlin
- E 20 (Liège —) Aachen Köln Duisburg Dortmund Hannover Berlin Frankfurt (O) (— Kunowice)
- E 20/3 Mukran Sassnitz (— Draugyste (Klaipėda))
- E 30 Karlsruhe Stuttgart Nürnberg Plauen Dresden Görlitz (— Zgorzelec)
- E 32 Frankfurt (M) Hanau Erfurt Leipzig Dresden
- E 35 (Arnhem —) Emmerich Duisburg Düsseldorf Köln Mainz Mannheim Karlsruhe (— Basel)
- E 40 (Forbach —) Saarbrücken Ludwigshafen Mannheim Frankfurt (M) Gemünden Nürnberg Schirnding (— Cheb)
- E 42 (Strasbourg —) Kehl Appenweier Karlsruhe Stuttgart
- E 43 Köln Limburg Frankfurt (Main) Heidelberg Mannheim — Stuttgart — Ulm — Augsburg — München — Freilassing (— Salzburg)
- E 45 (Padborg —) Flensburg Hamburg Hannover Würzburg Nürnberg Ingolstadt München Kufstein (— Wörgl)
- E 451 (Gedser —) Rostock Berlin <u>Halle</u> Erfurt Nürnberg Passau (— Wels)
- E 46 Mainz Frankfurt (M)
- E 55 (Trelleborg —) Sassnitz Hafen Stralsund Berlin/Seddin Dresden Bad Schandau (— Dečin)
- E 61 (Trelleborg —) Sassnitz Hafen Stralsund Berlin Dresden Bad Schandau (— Dečin)

(10) Switzerland

E 23	(Dijon —) Vallorbe —	Lausanne -	— Brig

- E 25 (Mulhouse —) Basel Olten Bern Brig (— Domodossola)
- E 35 (Karlsruhe —) Basel Olten Chiasso (— Milano)
- E 50 (Culoz —) Genève Lausanne Bern Zürich Buchs (— Innsbruck)

(11) Italy

E 25 (E	Brig —) Domodosso	la — Rho — Milano	— Genova
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- E 35 (Chiasso —) Milano Bologna Firenze Roma Napoli Salerno Messina
- E 45 (Innsbruck —) Brennero Verona Bologna Ancona Foggia Bari
- E 55 (Arnoldstein —) Tarvisio Udine Venezia Bologna
- E 70 (Modane —) Torino Rho Milano Verona Trieste Villa Opicina (— Seźana)
- E 72 Torino Genova
- E 90 (Menton —) Ventimiglia Genova Pisa Livorno Roma

(12) Norway

E 45 Oslo (— Kornsjø)

(13) Sweden

E 45	(Kornsjø —) Göteborg — Helsingborg — Malmö (— København)
E 53	Helsingborg — Hässleholm
E 55	Stockholm — Hässleholm — Malmö — Trelleborg (— Sassnitz Hafen)
E 59	Malmö — Ystad (— Świnoujście)
E 61	Stockholm — Hässleholm — Malmö — Trelleborg (— Sassnitz Hafen)

(14) Denmark

	(Malmö —) København — Odense — Fredericia — Padborg (— Flensburg)
E 451	Nyköbing — Gedser (— Rostock — Berlin — Halle Leipzig — Erfurt — Nürnberg — Passau — Wels)

(15) Austria

E 43	(Freil	lassing –	-)	Salz	burg
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- E 45 (München —) Kufstein Wörgl Innsbruck (— Brennero)
- E 451 (Nürnberg Passau —) Wels
- E 55 Linz Salzburg Schwarzach St. Veit Villach Arnoldstein (— Tarvisio)
- E 551 (Horni-Dvořiště —) Summerau Linz Selzthal St. Michael
- E 65 (Břeclav —) Bernhardsthal Wien Semmering Bruck a.d. Mur Klagenfurt Villach Rosenbach (— Jesenice)
- E 67 Bruck a.d. Mur Graz Spielfeld Strass (— Šentilj)

- E 50 (Buchs —) Innsbruck Wörgl <u>Kufstein (— Rosenheim Freilassing)</u> Salzburg Linz Wien (— Hegyeshalom)
- E 502 Bischofshofen Selzthal

(16) Poland

- E 59 (Ystad —) Świnoujście Szczecin Poznan Wroclaw Opole Chalupki
- E 65 Gdynia Gdánsk Warszawa Katowice Zebrzydowice (— Petrovice u. Karviné)
- E 20 (Frankfurt (O) —) Kunowice Poznan Warszawa Terespol (— Brest)
- E 30 (Görlitz —) Zgorzelec Wroclaw Katowice Krakow Przemysl Medyka (— Mostiska)
- E 75 Warszawa Białystok Sokólka Suwalki Trakiszki (— Mockava)

(17) Czech Republic

E 55	(Bad Schandau —) Dečin — Praha
E 551	Praha — Horní Dvořiště (— Summerau)
E 61	(Bad Schandau —) Dečin — Praha — Kolin — Česka Třebová — Brno — Břeclav (— Bratislava)
E 65	(Zebrzydovice —) Petrovice u. Karviné — Ostrava — Břeclav (— Bernhardstahl)
E 40	(Schirnding —) Cheb — Plzeň — Praha — Kolin — Ostrava CD (— Žilina)

(18) Slovakia

- E 40 (Ostrava CD —) Žilina Poprad Tatry Košice Čierna nad Tissou (— Čop)
- E 52 Bratislava Galanta Nové Zámky Stùrovo (— Szob)
- E 61 (Břeclav —) Bratislava Komárno (— Komaróm)
- E 63 Žilina <u>Lepoldov</u> Bratislava

(19) Hungary

E 61	(Komárno —) Komaróm — Budapest
E 631	Sopron — Szombathely — Nagyykanizsa
E 69	Budapest — Murakeresztúr (— Kotoriba)
E 691	Murakeresztúr — Gyékényes
E 71	Budapest — Dombóvár — Gyékényes (— Botovo — Koprivnica)
E 73	(Hodoš —) Bajánsenye — Zalaegerszeg — Boba — Veszprém — Székesfehérvár
E 85	Budapest — Kelebia (— Subotica)
E 50	(Wien —) Hegyeshalom — Budapest — Miskolc — Nyiregyháza — Záhony (— Čop)

- E 52 (Štúrovo —) Szob Budapest Cegléd Szolnok Debrecen Nyiregyháza
- E 56 Budapest Rákos Ujszász Szolnok Lőkösháza (— Curtici)

(20) Slovenia

- E 65 (Rosenbach —) Jesenice Ljubljana Ilirska Bistrica (— Šapjane)
- E 67 (Spielfeld Strass —) Šentilj Maribor Zidani Most
- E 69 (Cakovec —) Središče Pragersko Zidani Most Ljubljana Divaca Koper
- E 70 (Villa Opicina —) Sezana Ljubljana Zidani Most Dobova (— Savski Marof)
- E 73 Ormož Murska Sobota Puconci (— Hodoš)

(21) Croatia

- E 65 (Ilirska Bistrica —) Šapjane Rijeka
- E 69 (Murakeresrtúr —) Kotoriba Čakovec (— Središče)
- E 70 (Dobova —) Savski Marof Zagreb Strizivojna Vrpolje Vinkovci Tovarnik (— Sid)
- E 71 (Gyékényes —) Botovo Koprivnica Zagreb Karlovac Oštarije Rijeka
- E 751 Zagreb Sunja Volinja (Dobrljin Bihac Ripać —) Stremica Knin Split Šibenik
- E 771 (Bogojevo —) Erdut Vinkovci Strizivojna Vrpolje Slavonski Šamac (Bosanski Šamac Sarajevo — Čapljina —) Metković — Ploće
- E 753 Zagreb Karlovac Oštarije Gospić Knín Zadar
- E 773 (Magyavboly —) Beli Manastir Osijek Strizivojna Vrpolje
- E 702 (Sredisče —) Čakovec Varaždin Koprívnica Osijek Erdut (— Bogojevo)

(22) Bosnia-Herzegovina

- E 751 (Volinja —) Dobrljin Bihać Ripać (— Strmica)
- E 771 (Slavonski Šamac —) Bosanski Šamac Sarajevo Čapljina (— Metković)

(23) Serbia and Montenegro*

- E 79 Beograd Bar
- E 85 (Kelebia —) Subotica Beograd <u>Niš Preševo (— Tabanovci)</u> Kraljevo — Đeneral Janković (— Volkovo)
- E 66 Beograd Vršac (— Stamora Moravita)
- E 70 (Tovarnik —) Šid Beograd Niš Dimitrovgrad (— Dragoman)

(24) The former Yugoslav Republic of Macedonia

E 85 (Preševo —) Tabanovci (Đeneral Janković —) Volkovo — Skopje — Gevgelia (— Idomeni)

^{*} The numbering of lines corresponds to the situation before 28 June 2006 when the General Assembly admitted Montenegro as a Member State of the United Nations.

(25) Greece

- E 85 (Gevgelia —) Idomeni Thessaloniki Athinai
- E 853 Larissa Volos
- E 855 (Kulata —) Promachon Thessaloniki

(26) Romania

- E 851 (Vadul Siret —) Vicsani Pacsani
- E 95 (Ungeni —) Iasi Pascani Buzau Ploiesti Bucuresti Videle Giurgiu (— Ruse)
- E 54 Arad Deva Teius Vinatori Brasov Bucuresti
- E 56 (Lőkösháza —) Curtici Arad Timisoara Craiova Bucuresti
- E 560 Buzau Galati (— Reni Bender)
- E 562 Bucuresti Costanta
- E 66 (Vršac —) Stamora Moravita Timisoara

(27) Bulgaria

- E 95 (Giurgiu —) Ruse Gorna Dimitrovgrad
- E 951 Sindel Karnobat
- E 660 Ruse Kaspičan
- E 680 Sofia Mezdra Gorna Kaspičan Sindel Varna
- E 70 (Dimitrovgrad —) Dragoman Sofija Plovdiv Dimitrovgrad Svilengrad (— Kapikule)
- E 720 Plovdiv Zimnitza Karnobat Burgas
- E 855 Sofia Kulata (— Promachon)

(28) Finland

E 10 Hanko — Helsinki — Riihimäki — Kouvola — Vainikkala (— Luzhaika)

(29) Belarus

- E 20 (Terespol —) Brest Minsk Asinowka (— Krasnoe)
- E 14 (Indra —) Bigosovo Polak Vicebsk
- E 20/3 (Kena —) Gudagai Maladzečna Minsk

(30) Ukraine

E 30 Kiev — Kharkiv — Kupyansk — Topoli (— Solovei)

- E 391 Dnipropetrovsk Lozovaya Krasny Liman Kharkov
- E 40 (Čierna nad Tissou —) Čop Lvov
- E 50 Fastov Dnipropetrovsk Krasnoarmeisk Yasinovataya Debaltsevo Krasnaya Mogila (— Gukovo)
- E 593 Yasinovataya Kvashino (— Uspenskaya)
- E 851 Lvov Vadul Siret (— Vicsani)
- E 95 Kuchurgan Razdelnaya Kiev Khutor Mikhailovsky Zernovo (— Suzemka)

(31) Republic of Moldova

- E 95 (Iași —) Ungeny Chisinau Bendery (— Kuchurgan)
- E 560 (Galati —) Giurgiulesti (Reni —) Etulia Greceni (Bolgrad —) Taraclia Basarabeasca (Carabuteni —) Cimislia Bender

(32) Russian Federation

- E 10 (Vainikkala —) Luzhaika St. Petersburg Moskva
- E 12 (Zilupe —) Raz. Posinj Novosokol'niki Ržev Moskva
- E 20 (Asinowka —) Krasnoe Smolensk Moskva Nizhny Novgorod Perm Sverdlovsk* <u>Tyumen</u> <u>Kurgan (– Petropavlovsk)</u> — Omsk — Novosibirsk — Krasnoyarsk — Irkutsk — Vladivostok
- E 20/3 Kaliningrad Cherniakhovsk Nesterov (— Kybartai)
- E 24 Moskva Ryazan Ruzaevka Samara Ufa Chelyabinsk Kurgan
- E 30 (Topoli —) Solovei Valuiki Samara Orenburg (— Iletsk I)
- E 50 (Krasnaya Mogila —) Gukovo Likhaya Volgograd Astrakhan (— Aksaraiskaya II)
- E 95 (Zernovo —) Suzemka Bryansk Moskva
- E 99 Ryazan Kochetovka I Gryazi Krasnodar <u>Veseloe (– Gantiadi)</u> Novorossisk
- E 593 (Kvashino —) Uspenskaya Rostov na Donu

(33) Turkey

E 692	Cetinkaya — Kars — ^{Dogu Kapi (} — Akuryan) (— Akhalkalaki)
E 70	(Svilengrad —) Kapikule — Istanbul — Haydarpaşa — Ankara — Kapiköy [— Razi (Iran,Islamic Republic of)]
	Nusajbin [— Kamichli (Syrian Arab Republic)]
E 74	Eskisehir — Kütahya — Balikser — Bandirma
E 97	Yenice — Mersin

(34) Lithuania

E 14	Radviliškis — Panvezys — Rokiskis — Obeliai (— Eglaine)
E 20/3	(Nesterov —) Kybartai— Kazlu Ruda — Kaunas
	(Sassnitz — Mukran —) Draugyste — Klaipėda — Šiauliai — Radviliškis — Kaišiadorys — Vilnius — Kena
	(— Gudagai)
E 75	(Trakiszki —) Mockava — Šeštokai — Kaunas — Šiauliai — Šarkiai (— Meitene)

(35) Armenia

E 692	(Sadakhlo —) Ayrum — Gyumri — Akhuryan (— Dogu Kapi)
	Gyumri — Yeraskh (— Velidag)
E 693	Gyumri — Yerevan — Hrazdan — Dilijan — Ijevan — Ghazakh (— Barkhudarli)

E 694 Gyumri — Artashat — (Nakhichevkan — Karchivan —) Meghri — Agbent (— Bartaz)

^{*} Yekaterinburg.

(36) Azerbaijan

E 595	(Samur —)	Yalama —	Baku

- E 60 (Gardabani —) Beyuk Kyasik Baku (— Turkmenbashi)
- E 694 Astara Baku Dzhulfa Nakhichevakan (— Artashat)

(37) Georgia

- E 99 (Veseloe —) Gantiadi Poti
- E 60 <u>Batumi</u> — Tbilisi — Gardabani (— Beyuk — Kyasik) E 692 <u>(Ayrum —) Sadakhlo</u> — Tbilisi

(38) Kazakhstan

- E 20 (Kurgan —) Petropavlovsk (— Omsk)
- E 24 (Kurgan —) Presnogorkovskaya Kökshetaú Aqmola Mointy Druzhba (— Alashankou)
- E 30 (Orenburg —) Iletsk I Kandagach
- E 50 (Astrakhan —) Aksaraiskaya II Atyraú Makat Kandagach Arys Almaty Aqtogai
- E 60 (Salar —) Chengeldy Arys
- E 597 Makat Beyneu (— Kungrad)
- E 592 Beyneu Shetpe Aqtau

(39) Turkmenistan

- E 60 Turkmenbashi Ashgabat Chardzhev (— Alat)
- E 695 (Termis) (Karshi)
- E 597 (Nukus —) Dashhowuz (Urganch —) Chardzhev

(40) Uzbekistan

- E 60 (Chardzhev —) Bukhara Tashkent Salar (— Chengeldy)
- E 696 Tashkent Khavast Andizhan (— Osh)
- E 695 Bukhara Karshi Termiz Galaba (— Hairaton)
- E 597 (Beyneu —) Kungrad Nukus (Dashhowuz —) Urganch (— Chardzhev)

(41) Latvia

E 12	Ventspils Liepaja — Jelgava — Krustpils — Rēzekne — Zilupe (— Sebezh)
E 14	Riga — Krustpils (Obeliai —) Eglaine — Daugavpils — Indra (— Bigosovo)
E 75	(Šarkiai —) Meitene — Jelgava — Rīga — Lugaži (— Valga)

(42) Estonia

E 75 Tallin — Tapa — Tartu — Valga (— Lugaži)

Annex II

Technical characteristics of main international railway lines

Preliminary remarks

The *parameters* are summarized in table 1.

The values shown in column A of table 1 are to be regarded as important objectives to be reached in accordance with national railway development plans, and any divergence from these values should be regarded as exceptional.

Lines have been divided into two main categories:

(a) *Existing* lines, capable of being improved where appropriate; it is often difficult and sometimes impossible to modify, for instance, their geometrical characteristics, and the requirements have to be eased for such lines;

(b) *New* lines to be built: within certain economic limits, the geometrical characteristics in particular may be freely selected; it is necessary to distinguish two subcategories:

(i) Lines intended solely for *passenger* traffic (excluding goods traffic);

(ii) Lines for *mixed* or *combined* traffic, for both passenger and goods services.

The parameters adopted in no way hinder technical progress: they are minimum requirements. A railway network may adopt more ambitious parameters if it considers this worthwhile.

By analogy, the specifications given in table 1 also apply, where appropriate, to ferryboat services which are an integral part of the railway network.

Exis infrast	${\cal A}$ Existing lines which meet the infrastructure requirements and lines to be improved or reconstructed		B New lines
	For	B1 For passenger traffic only	B2 For passenger and goods traffic
		2	2
	UIC* B	UIC C1	UIC CI
Minimum distance between track centres	4.0 m	4.2 m	4.2 m
Nominal minimum speed:			
Line category:			
P1	350 km/h	350 km/h	350 km/h
P2	250 km/h	250 km/h	250 km/h
P3	200 km/h	200 km/h	200 km/h
P4	200 km/h	200 km/h	200 km/h
P5	120 km/h	120 km/h	120 km/h
P6	N/A	N/A	N/A
P1520	160 km/h	160 km/h	160 km/h
P1600	160 km/h	160 km/h	160 km/h
F1	120 km/h		120 km/h
F2	120 km/h		120 km/h
F3	100 km/h		100 km/h
F4	N/A		N/A
F1520	120 km/h		120 km/h
F1600	100 1200 /b		100 km/h

* UIC: International Union of Railways.

Table 1

	B3 High speed lines			17 t							35 mm/m			
B New lines	B2 For passenger and goods traffic		22.5 t	17 t	16 t	22.5 t	20 t	18 t	8 t	UIC 71	12.5 mm/m	400 m	750 m	None
	B1 For passenger traffic only			17 t							35 mm/m	400 m		None
A Existing lines which meet the infrastructure requirements and lines to be improved or reconstructed			22.5 t	17 t	16 t	20 t	20 t	18 t	8 t	UIC 71		400 m	750 m	None
Exis infrast		Authorised mass per axle:	Locomotives (<200 km/h)	Rail cars and rail motor sets (<300 km/h)		≤100 km/h	≤120 km/h	≤140 km/h	Authorized mass per linear metre	Test train (bridge design)		Minimum platform length in principal stations	Minimum useful siding length	
					Carriages	Wagons					Maximum gradient			Level crossings
		5							9	L	8	6	10	11

1. Number of tracks

Main international lines must provide high capacity and allow precision timing of operation.

It is generally possible to meet both requirements only on lines with at least two tracks.

2. Vehicle loading gauge

This is the minimum loading gauge for main international lines.

On *new* lines, only a small marginal investment cost is normally incurred by adopting a high loading gauge, and the UIC C1 gauge has therefore been chosen.

The C1 gauge allows, for instance:

- The transport of road goods vehicles and road trains (lorry with trailer, articulated vehicle, tractor and semi-trailer) conforming to the European road loading gauge (height 4 m, width 2.5 m) on special wagons with a loading height 60 cm above rail level;
- The transport of ordinary road semi-trailers 2.5 m wide and 4 m high on recess wagons with normal bogies;
- The transport of ISO containers 2.44 m wide and 2.9 m high on ordinary flat wagons;
- The transport of swap-bodies 2.5 m wide on ordinary flat wagons.

The *existing* lines across mountainous regions (such as the Pyrenees, Massif Central, Alps, Jura, Apennines, Carpathians) have many tunnels conforming to the Technical Unit loading gauge, or gauges of slightly greater height at the centre of the track. Increasing this to conform to the UIC C1 gauge is in almost all cases impossible from the economic and financial standpoints.

The UIC B gauge has therefore been chosen for these lines, as it allows, for instance:

- The transport of ISO containers 2.44 m wide and 2.90 m high on flat container-wagons with a loading height 1.18 m above rail level;
- The transport of swap-bodies 2.5 m wide and 2.6 m high on ordinary flat wagons (loading height 1.246 m);
- The transport of semi-trailers on recess wagons.

Most of the *existing* main international lines offer at least the UIC B gauge. In the case of the others, improvement to this standard does not normally require major investment.

3. Minimum distance between track centres

This is the minimum distance between track centres for double-track main lines outside stations.

An increase in the distance between track centres presents the following advantages:

- Decrease in the aerodynamic pressure when two trains pass each other, an advantage which increases in proportion to the speed;
- Some relief from the constraints imposed in the transport of out-of-gauge loads;
- Possibility of using high-powered mechanized equipment for track maintenance and renewal.

On *existing* double-track lines, and outside stations, the distance between track centres varies between 3.5 m and 4 m. When tracks are completely renewed, efforts should be made to increase the distance, with the aim of achieving a minimum distance of 4 m.

On *new* lines, the choice of a generous between-track distance normally entails only a limited marginal investment, at least outside tunnels and up to 4.2 m. A minimum distance between track centres of 4.2 m has therefore been selected. This is sufficient for high speeds up to 300 km/h (e.g. the new Paris — south-east high-speed line between Paris and Lyon).

4. Nominal minimum speed

The nominal minimum speed determines the geometrical characteristics of the section (radius of curves and cant), the safety installations (braking distances) and the braking coefficient of the rolling stock. The speeds indicated are as per the line categories identified in European Union Regulation No. 1299/2014, paragraph 4.2.1 – TSI categories of lines.

On *existing* lines, maximum speeds are dependent upon the radius of the curves. The nominal minimum speed selected (160 km/h) is the general practice on sections with straight track or wide-radius curves. In some cases the layout and signalling can be improved, without excessive investment, to allow 160 km/h to be reached on some sections.

On *new* lines much higher nominal speeds can be adopted. The nominal speeds selected are those for new lines recently completed, under construction or at the planning stage.

The nominal speed is not the same as the commercial speed. The commercial speed is the distance between the origin and destination of a train divided by the total journey time, including intermediate stops.

5. Authorized mass per axle

This is the authorized mass per axle which international main lines should be able to bear.

International main lines should be capable of taking the most modern existing and future vehicle traffic, in particular:

- Locomotives with a mass per axle of 22.5 tonnes; on lines which normally take a mass per axle of 20 tonnes, locomotives with a slightly higher mass per axle are tolerated because the ratio of the number of locomotive axles to the total number of axles is usually very low and the suspension of a locomotive causes less wear than that of a wagon;
- Rail cars and rail motor sets with a mass per axle of 17 tonnes (this is the mass per axle of the French Railways TGV sets);
- Carriages with a mass per axle of 16 tonnes (in existing and planned ordinary carriage stock, no carriage has or will have a mass per axle, when loaded, exceeding 16 tonnes);
- Wagons with a mass per axle of 20 tonnes, which corresponds to UIC class C; for *new* mixed or combined traffic lines a wagon mass per axle of 22.5 tonnes up to 100 km/h has been adopted, in conformity with recent UIC decisions. The mass per axle limits of 20 tonnes for a speed of 120 km/h and 18 tonnes for a speed of 140 km/h are those set by the UIC regulations.

The mass per axle values shown are for a wheel diameter of not less than 840 mm, in accordance with the UIC regulations.

6. Authorized mass per linear metre

The authorized mass per metre of length over buffers of vehicles which international lines should be capable of accommodating has been set at 8 t, conforming to UIC class C4.

7. Test train (bridge design)

This is the minimum "test train" on which bridge design for international main lines should be based.

On new lines for mixed or combined traffic, the UIC 71 test train is used.

On *new* lines restricted to *passenger* traffic, no international standard has been laid down.

8. Maximum gradient

This is the gradient not to be exceeded on main international lines.

On existing lines, the gradient is a factor which it is virtually impossible to alter.

On *new* lines reserved for passenger traffic, the value 35 mm/m has been adopted (this is the standard used on the Paris — south-east high-speed line between Paris and Lyon).

On *new* lines for *mixed* or *combined* traffic, the value 12.5 mm/m has been adopted. This is the highest in any current national planning.

The gradient depends upon the length of the slope; the longer the slope the smaller the gradient and vice versa.

9. Minimum platform length in principal stations

The length of 400 m adopted by UIC has been chosen. A platform with a length of 400 m will take, for example:

- A train consisting of a locomotive and 13 coaches 27.5 m long, or a locomotive and 14 coaches 26.4 m long;
- A train consisting of two TGV sets as used on the Paris south-east line.

A principal station platform length exceeding 400 m was not adopted, for two reasons:

- "Passenger resistance" from passengers on foot, especially in dead-end stations;
- Excessive investment costs, especially in modifying existing dead-end stations.

10. Minimum useful siding length

The minimum useful siding length on main international lines is significant only for goods trains.

The length of 750 m adopted by UIC was chosen. This permits the movement and stabling of goods trains of a gross hauled weight exceeding 5,000 tonnes in class C4 (8 gross tonnes per metre of length); moreover, a train of 1,500 hauled gross tonnes to be stabled on a 750 m siding has a mass of little more than 2 tonnes per metre of length.

11. Level crossings

New main international lines should be built without any road level crossings.

On *existing* main international lines, the systematic replacement of level crossings by over-or under-passes is planned, except in the few cases where such replacement is physically impossible.

European Agreement on Main International Railway Lines (AGC) Revision 4

European Agreement on Main International Railway Lines (AGC) provides legal and technical framework for the development of a coherent and efficient international rail network in the ECE region. The AGC identifies railway lines of major international importance, the E rail network, and their technical characteristics as a basis for further development of the European railway infrastructure. It defines infrastructure parameters for two categories of lines: those already existing and those to be newly constructed. The latter are again divided into lines for goods and passenger traffic and lines for passenger traffic only.

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