



EUROPEAN COMMISSION
ENTERPRISE DIRECTORATE-GENERAL

Environmental aspects of enterprise policy, resource-based and specific industries
Aerospace, defence, rail and maritime industries

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M/300 EN

**MANDATE FOR STANDARDISATION
ADDRESSED TO CEN, CENELEC and ETSI
in the field of
CABLEWAY INSTALLATIONS DESIGNED TO CARRY PERSONS**

1. MOTIVATION.

- 1.1 This mandate falls within the framework of the directive relating to cableway installations designed to carry persons (directive adopted on common position on 16th December 1999).
- 1.2 The scope of this directive is the free circulation of safety components of installations and subsystems of cableway installations by harmonising the essential requirements for safety, health, environmental protection and consumers protection.
- 1.3 Cableway installations designed to carry persons means installations made up of several components and subsystems, designed, manufactured, assembled and put into service with the object of providing an operational service to carry persons.
- 1.4 Cableway installations sector ranks among the industrial activities linked to the production of capital equipment and to activities in the building and civil engineering sector.
- 1.5 Cableway installations can fall under the application domain of Council Directive 93/98/EC on the procurement procedures of entities operating in the water, energy, transport and telecommunications sectors.
- 1.6 In the meeting of 5th May 1994, Committee 98/34 gave its agreement on the programming mandate M/068 on this subject. On 17th February 1995 CEN transmitted, in the name of the three European standardisation bodies, a

programme in line with the mandate. On 23rd March 1999 the Commission asked CEN for a revision of the programme on the basis of the last draft decision that was, at the time, a common position. The revised programme, herewith annexed, was submitted by CEN on 12th November 1999.

2. DESCRIPTION OF THE MANDATED WORK.

- 2.1 CEN, CENELEC and ETSI are asked to carry out the common standardisation programme (as described in Annex 1 and 2), taking into account the requirements, which arise from the Directive adopted on common position on 16th December 1999 (observe especially annex II, chapter I and recital 25).
- 2.2 Where equipment is covered by the scope of other Directives, existing or known to be in preparation, the standards elaborated under this mandate should not overlap with aspects mandated under other Directives. However, the standards should take account of, and where necessary make reference to, other European standards in the field, either existing or in preparation. Account should be taken of the implications for other aspects of Community policy - for example, environmental and health and safety questions.

3. BODIES TO BE ASSOCIATED.

The elaboration of the standards should be undertaken in co-operation with the broadest possible range of interested groups, including international and European level associations. Those involved should include railway operators, infrastructure managers and regulatory bodies; manufacturers and installers of cableway equipment and other industries associated with the cableway industry and passenger groups. In particular, co-operation with OITAF and FIANET is regarded as essential.

4. EXECUTION OF THE REQUEST.

- 4.1 The mandate will be carried out before April 2004 according to the programme described in Annex 1 and 2. This mandate could later be completed, if necessary. The programme itself could be adapted and/or completed depending on the progress made. The European standards bodies will transmit amendments to this programme to the Commission, which will inform the Committee on standards and technical regulations. The work to be undertaken and their results should be inter-connected, compatible and mutually acceptable to CEN.
- 4.2 CEN, CENELEC and ETSI will have to present the draft standards mentioned above by the dates agreed. The European standards will have to be adopted by the agreed dates. On these dates, the three linguistic versions (DE, EN, FR) must be available as well as the correct titles in the other official Community languages.
- 4.3 The European standards adopted should be transposed into national standards and differing national standards will have to be withdrawn from the catalogues of the national standards organisations in the Member States within six months of their adoption.

4.4 The acceptance of this standardisation mandate by CEN, CENELEC and ETSI will open the standstill period referred to in Article 7 of the amended directive 98/34/EC¹ of 22 June 1998 (ex 83/189/EEC of 28 March 1983).

- Annexes :**
- 1) GENERAL PRESENTATION OF THE PROGRAMME
 - 2) STANDARDISATION PROGRAMME

¹ OJ L204 of 21.07.98

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Secrétariat

CEN/TC

242

"Prescriptions de sécurité des installations de transport à câbles destinées aux personnes"

"Safety requirements for passenger transportation by rope"

CEN/TC 242 N 333 E

October 1999

**Directive relating to Cableway installations
designed to carry persons**

General presentation of the programme

Date : October 1999

Note : For examination and modification by the Project Team

Programming Mandate

CEN/CENELEC/ETSI

Within the field of Cableway installations designed to carry persons

Programming Proposal

The CEN, CENELEC and ETSI are requested to draw up a standards programme for the safety components of installations designed to carry persons.

This programming falls within the framework of the directive proposal relative to cableway installations designed to carry persons and it must allow in particular to comply with the provisions of paragraph 2 of article 3, chapter I, of this directive proposal.

Standards Programme Proposal

It is proposed to draw up the harmonised European standards programme covering the fields referred to in the programming mandate :

WI	Titles
00242001	Terminology
00242002	General requirements - Part 1 : Requirements applicable to all installations
00242014	General requirements - Part 2 : Additional requirements for jig back bicable aerial ropeways without carrier truck brakes
00242003	Calculations
00242005	Tensioning devices
00242006	Mechanical devices
00242008	Electrical installations
00242009	Civil engineering works
00242010	Precommissioning inspection, maintenance and operational inspection
00242011	Recovery and evacuation
00242012	Operation

00242013	Quality assurance
00242015	Ropes - Part 1 : Selection criteria for ropes and their end fixings
00242016	Ropes - Part 2 : Safety factors
00242017	Ropes - Part 3 : Long splicing of 6 strand hauling, carrying-hauling and towing ropes
00242018	Ropes - Part 4 : End fixings
00242019	Ropes - Part 5 : Storage, transportation, installation and tensioning
00242020	Ropes - Part 6 : Discard criteria
00242021	Ropes - Part 7 : Inspection, repair and maintenance
00242022	Ropes - Part 8 : Non-destructive testing
00242023	Carriers - Part 1 : Grips, cabins, chairs, T-bars and platters
00242024	Carriers - Part 2 : Carrier trucks, suspensions of aerial ropeways, rods and springboxes, carriages, onboard brakes
00242025	Carriers – Part 3 : Fatigue testing

A reflection is underway within CEN/TC 242 concerning how to tackle the problem of electromagnetic compatibility : normative references to the basic standards or preparation of a draft standard specific to cableways for passenger transport.

For the successful execution of this programme, the following working groups will be set up:

- Secretariat and Chairmanship of the CEN/TC 242 Technical Committee ;
- Editing Committee ;
- Project Team and Conformity Assessment Team ;
- « Worker protection » ad hoc group and « Transport of disabled persons » ad hoc group ;
- Secretariats and convenorships of the Working Groups ;
- Participation in CEN overheads.

Justification of the proposed programme

1 - Coherence of the programme

As reminded in the explanatory memorandum of the directive proposal, the objectives of the latter and in particular compliance with the essential requirements can only be reached by a set of standards covering both each safety component of an installation and the complex system of components which constitutes an installation located within its environment.

- The proposed items WI 00242001, WI 00242002, WI 00242003, WI 00242013 and WI 00242014 concern directly the installation in its complexity.
- The proposed items WI 00242015, WI 00242016, WI 00242017, WI 00242018, WI 00242019, WI 0242020, WI 00242021, WI 00242022, WI 00242005, WI 00242006, WI 00242023, WI 00242024, WI 00242008 and WI 00242009 concern specific components, safety components and subsystems of the installation. They will deal both with their inherent specifications and with their respective interrelations or interfaces.
- Items WI 00242010, WI 00242011 and WI 00242012 concern the specifications allowing to check the conformity, once achieved, of the installation with the preceding items and with the use of the installation by the public, i.e. operation ; WI 00242011 has, however, also some repercussions on the design of the installation.
- All of the draft standards satisfy the provisions of chapters III and IV of the directive proposal.
- In addition, following a special study by two ad'hoc groups, the constructional provisions allowing to ensure the safety of the workers and the transport of disabled persons will be integrated into each standard.
- Combined with the obligation provided for in article 4, chapter I, of the directive proposal to subject each installation to a safety analysis, this standards programme proposal thus appears to us to meet the objectives concerning both the components of an installation and this installation taken as a whole.

2 – Conformity to the essential requirements of the directive proposal (doc N 327)

The description planned for the items of the proposed programme and the correspondence of the content of the latter with the essential requirements of the directive proposal are annexed herewith.

The conformity of the safety components of an installation and that of the entire installation to the standards of the proposed programme should therefore be able to provide presumption of conformity to the essential requirements of the directive proposal.

3 – Economic justifications

The motivations and justifications given in the explanatory memorandum of the directive proposal, and of its preamble, remain valid for the introduction of harmonised European standards.

Furthermore, the quest for common technical specifications for cableway installations has always been an objective of the various parties involved in the construction and operation of these installations :

a) The O.I.T.A.F. (Organisation Internationale des Transports par Câbles) has been working for a very long time on drawing up technical recommendations along these lines.

b) The F.I.A.N.E.T. (Fédération Internationale des Associations Nationales d'Exploitants de Téléphériques) has also taken a stand regarding this matter.

c) The professionals of the cableway installation construction sector, IARM, have signified their wish to see a coherent programme of standards for these installations rapidly concluded. Over and above the advantage of avoiding different specifications throughout the different European countries, this standardisation must allow the European industrialists to consolidate and develop their international leadership on the subject matter.

d) The cableway installations monitoring authorities have felt the need, and this since well over 40 years, to meet each year in order to exchange information and reflections concerning the safety of these installations.

e) All of the parties concerned by cableway installations in Europe (E.U. and E.F.T.A.) have accepted to participate, independently of the reflection undertaken by the European Union, in a European standardisation Technical Committee, which for them entails high expenses.

This European effort towards a technical and regulatory coherence and these diverse stands have perfectly justified the need for passing henceforth to a higher level of coherence, that of standardisation.

But this effort will only take on its true signification and efficacy if it is a matter of introducing a programme of harmonised European standards, i.e. a programme forming the subject of a European Union mandate within the framework of the directive proposal currently under examination.

Indeed, failing such a mandate or directive, since standards are not automatically recognised to be of mandatory application by the monitoring authorities and as each country has its own regulations, the general objectives of the directive proposal would not be able to be reached.

Hence the justification to execute, via a mandate, the above-proposed programme.

Execution, in stages, of the programme

It is extremely difficult to execute the proposed programme in significant stages. Indeed, the coherence between the different standards of this programme, in order to comply with the complexity of an installation by homogenising the multiple interfaces between these standards, requires that they be simultaneously drawn up over the course of time.

Moreover, a project team has been set up in order to accomplish the homogeneity and coherence of the standards.

Association of other bodies

The O.I.T.A.F will be associated in several ways :

- by the recommendations which this organisation has drawn up for ski-tows and the provisions for the passengers ;
- by the presence of the Chairman of this organisation within CEN/TC 242 ;
- by the numerous studies, seminars, congresses of this organisation.

The O.I.T.A.F participates in the work of CEN/TC 242 and endorses the proposed standardisation programme.

The F.I.A.N.E.T has taken a favourable stand to the drawing up of this directive.

"Prescriptions de sécurité des installations de transport à câbles destinées aux personnes"

"Safety requirements for passenger transportation by rope"

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CEN/TC 242 N 327E
Novembre 1999

Nos références : NTG/LGI

**Correspondence between Essential
Requirements of Directive draft and the work
programme of CEN/TC 242**

1. DATE : 01/1999

**Note : For verification and addition of working group' convenors by the
30th March 1999.**

Essential requirements	Draft standards
<p>1. Purpose This Annex sets out the essential requirements, including maintainability and operability, applicable to the design, construction and entry into service of installations referred to in Article 1(5) of this Directive.</p>	<p>Work programme applies to these 5 stages of requirements – design – construction – entry into service – operation – maintenance</p>
<p>2. General requirements</p>	
<p>2.1. Safety of persons The safety of users, workers and third parties is a fundamental requirement for the design, construction and operation of installations.</p>	<p>- standards take into account the safety of passengers and third parties.</p> <p>- Workers protection is the subject of requirements made by an ad hoc group, and these will be introduced in standards</p> <p>- design, construction and operation are dealt with work programme</p>
<p>2.2. Principles of safety All installations must be designed, operated and serviced in accordance with the following principles, which are to be applied in the order given::</p> <ul style="list-style-type: none"> - eliminate or, if that is not possible, reduce risks by means of design and construction features; - define and implement all necessary measures to protect against risks which cannot be eliminated by the design and construction features; - define and state the precautions which should be taken to avoid the risks which it has not been possible to eliminate completely by means of the provisions and measures referred to in the first and second indents. 	<p>- prEN 12929-1, clause 4.1.1 deals with these requirements.</p> <p>All other standards refer to this standard and include a clause specific " Safety principles", which refers to prEN 12929-1</p>

Essential requirements	Draft standards
<p>2.3. Consideration of external factors Installations must be so designed and constructed as to make it possible to operate them safely, taking into account the type of installation, the nature and physical features of the terrain on which it is installed and its surroundings, the atmospheric and meteorological factors, as well as possible structures and obstacles located in the vicinity either on the ground or in the air.</p>	<p>prEN 12929-1, clause 5.1 " Choice of line", clause 7 "Clearance envelope, safety distances", clause 14.3 "Marking of obstacles to aircraft"</p> <p>prEN 12930, clause 6.5 "Actions" which comprises climatic conditions</p> <p>prEN 1909, clause 5.2.1 which takes into account the prolonged exposure of persons to bad weather conditions</p> <p>prEN 12397, clause 4.2.2 Operation under exceptional circumstances</p> <p>prEN 13107, clause 7.2.5, 7.3.5, 7.4.5, 8.1.2 take into account climatic actions, ground displacements, avalanches</p>
<p>2.4. Dimensions The installation, the subsystems and all its safety components must be dimensioned, designed and constructed to withstand with a sufficient degree of safety all stresses encountered under all foreseeable conditions, including those which occur when not in operation, and taking account in particular of outside influences, dynamic effects and fatigue phenomena, while complying with the acknowledged rules of the art, , in particular with regard to the choice of materials.</p>	<p>Dimensions are taken into account in prEN 12930 and in particular standards of subsystems :</p> <ul style="list-style-type: none"> - prEN 12927 : Ropes; - prEN 1908 : Tensioning devices; - prEN 13223 : Mechanical devices- WI 00242023 and WI 00242024 Carriers ; - prEN 13107 : Civil engineering works

Essential requirements	Draft standards
<p>2.5. Assembly</p> <p>2.5.1. The installation, the subsystems and all safety components must be designed and constructed in such a way as to ensure that they can be safely assembled and put into place.</p> <p>2.5.2. The safety components must be so designed as to make assembly mistakes impossible, either as a result of construction or by means of appropriate markings on the components themselves.</p>	<p>prEN 12929-1, clause 14.7 "Operating and maintenance instructions"</p> <p>prEN 12408, clause 4 prescriptions for a quality assurance system</p>
<p>2.6. Integrity of the installation</p> <p>2.6.1. The safety components must be designed and constructed and <u>be</u> usable in such a way as to ensure that, in every case, their own operational integrity and/or the safety of the installation is ensured, as defined in the safety analysis in Annex III, so that their failure is highly improbable and with an adequate safety margin.</p>	<p>prEN 12929-1, clause 4.2.1 "Safety study"</p> <p>prEN 12408 Quality assurance</p>
<p>2.6.2. The installation must be designed and constructed in such a way as to ensure that during its operation any failure of a component which might affect safety, even indirectly, is met by an appropriate measure being taken in good time.</p>	<p>prEN 12929-1, clause 4.2.2 " Protective measures"</p> <p>prEN 1709, clause 6 "Maintenance"</p>
<p>2.6.3. The safeguards referred to in points 2.6.1 and 2.6.2 must apply throughout the period between two scheduled inspections of the component concerned. The time period for the scheduled inspection of the safety components must be clearly indicated in the inspection manual.</p> <p>2.6.4 Safety components which are incorporated into installations as spare parts must satisfy the essential requirements of this Directive and the conditions relating to their smooth interaction with the other parts of the installations.</p>	<p>prEN 1709, clause 6 "Maintenance" and clauses 7 "Operational inspections"</p> <p>prEN 13107, clause 12 "Maintenance"</p> <p>prEN 12927-7, clause 7 "Inspection"</p>

Essential requirements	Draft standards
<p>2.6.5. Measures must be taken to ensure that the effects of a fire in the installation do not endanger the safety of persons being transported and workers.</p>	<p>prEN 12929-1, clause 14.1 " Fire protection and firefighting"</p> <p>prEN 13107, clause 7.2.4.12, 7.3.4.8 "Fire"</p> <p>prEN 12927-7, clause 7.3 "Extraordinary inspections"</p>
<p>2.6.6. Special Measures must be taken to protect installations and persons from the effects of lightning.</p>	<p>prEN 12929-1, clause 14.2 "Protection against lightning"</p> <p>prEN 12927-7, clause 7.3 "Extraordinary inspections"</p>

Essential requirements	Draft standards
<p>2.8. Maintainability The installation must be designed and constructed so as to enable routine or special maintenance and repair operations to be carried out safely.</p>	<p>prEN 12929-1, clause 4.3 "General work safety requirements clause 11 " Passageways and work areas "</p> <p>prEN 1709, clause 5.4 "Delivery of required documents to the operator", clause 6 " Maintenance"</p> <p>WI 00242023, clause 6.7.1 "Construction principles"</p> <p>prEN 13107, clause 12 "Maintenance", clause 13 "Work safety"</p> <p>prEN 13223, clause 10.4.2 "Working platforms and ladders", clause 12 "Accident prevention and protection of employees"</p>
<p>2.9. Nuisance The installation must be designed and constructed in such a way as to ensure that any internal or external nuisance resulting from noxious gases, noise emissions or vibrations falls within prescribed limits.</p>	<p>prEN 12929-1, clause 4.1.2 "Possible injuries to persons"</p>

Essential requirements	Draft standards
3. Infrastructure requirements	
<p>3.1. Layout, speed, distance between vehicles</p> <p>3.1.1. The installation must be designed to operate safely taking into account the characteristics of the terrain and its surroundings, atmospheric and meteorological conditions, any possible structures and obstacles located in the vicinity either on the ground or in the air in such a way as to cause no nuisance or pose no danger under any operational or servicing conditions or in the event of an operation to rescue persons.</p> <p>3.1.2. Sufficient distance must be maintained laterally and vertically between vehicles, towing devices, tracks, cables, etc., and possible structures and obstacles located in the vicinity either on the ground or in the air, taking account of the vertical, longitudinal and lateral movement of the cables and vehicles or of the towing devices under the most adverse foreseeable operating conditions.</p> <p>3.1.3. The maximum distance between vehicles and ground must take account of the nature of the installation, the type of vehicles and the rescue procedures. In the case of open cars, it must also take account of the risk of fall as well as the psychological aspects associated with the distance between vehicles and ground</p> <p>3.1.4. The maximum speed of the vehicles or towing devices, the minimum distance and their acceleration and braking performance must be chosen to ensure the safety of persons and the safe operation of the installation.</p>	<p>prEN 12929-1, clause 5 "line of cableway", clause 7 "Clearance envelope, safety distances", clause 13 "Recovery and evacuation", clause 4.3 "General work safety requirements"</p> <p>prEN 1909, clause 9 "Requirements for evacuation of the passengers"</p> <p>prEN 13107, clause 7 "Actions and environmental influences", clause 12</p> <p>prEN 12929-1, clause 7 "Clearance envelope, safety distances"</p> <p>prEN 12929-1, clause 8 "Maximum permissible running height above ground"</p> <p>prEN 12929-1, clause 7, clause 9 " Running speed and interval ", clause 10 " Drive systems (including brakes)</p>

Essential requirements	Draft standards
<p>3.2. Stations and structures along the line</p> <p>3.2.1. Stations and structures along the line must be designed, installed and equipped so as to ensure stability. They shall permit safe guidance of the cables and vehicles, and the towing devices, and enable maintenance to be safely carried out, under all operating conditions.</p> <p>3.2.2. The entry and exit areas of the installation must be designed so as to guarantee the safety of the traffic of vehicles, towing devices and persons. The movement of vehicles and towing devices in the stations must be capable of taking place without risk to persons, taking into account their possible active collaboration to their movement.</p>	<p>prEN 13107 Civil engineering works</p> <p>prEN 12929-1, clause 7 3 "Clearance envelope, safety distances", clause 11 "Passageways and work areas", Annexes A and B</p> <p>prEN 13107, clause 13 "Work safety"</p>
<p>4. Requirements relating to cables, drives and brakes and to mechanical and electrical installations</p>	

Essential requirements	Draft standards
<p>41. Cables and their supports</p> <p>4.1.1. all measures must be taken in line with the latest technological developments to:</p> <ul style="list-style-type: none"> – avoid cables or their attachments breaking; – ensure their minimum and maximum stress values; – ensure that they are safely mounted on their supports and prevent derailment; – enable them to be monitored. <p>4.1.2. If it is not possible to prevent all risk of cable derailment, measures must be taken to ensure that cables can be retrieved and the installation shut down without risk to persons in the event of derailment..</p>	<p>prEN 12930, clause 7 "Verification by calculation for ropes"</p> <p>prEN 12929-1, clause 12 "Rope tension and guides"</p> <p>prEN 12929-2, clause 6 "Measures to ensure the integrity of the haul rope loop"</p> <p>prEN 12927-7 Ropes – Part 7 : Calculation, repair and maintenance</p> <p>prEN 13223 Mechanical devices</p> <p>prEN 1908 Tensioning devices</p> <p>prEN 13243 Electrical installations</p> <p>prEN 12929-1, clause 12 "Rope tension and guides"</p> <p>prEN 13243, clause 8.8 "Derailment detectors"</p> <p>prEN 13223, clause 10.1.7 "Rope-catchers for carrying-hauling ropes", clause 10.1.8 "Devices for detection of a deropement", clause 10.2.8 "Catching devices for track ropes"</p> <p>prEN 13107, clause 7.2.4.6, 7.2.4.7, 7.4.4.4, 7.4.4.5 actions to be taken into account for civil engineering works in case of deropement</p>

Essential requirements	Draft standards
<p>4.2. Mechanical installations</p> <p>4.2.1. Drives The drive system of an installation must be of a suitable performance and capability, adapted to the various operating systems and.</p> <p>4.2.2. Standby drive The installation must also have a standby drive with an energy supply which is independent of that of the main drive system, A standby drive is not, however, necessary if the safety analysis shows that persons can leave the vehicles and, in particular, towing devices easily, quickly and safely even if a standby drive is not available.</p> <p>4.2.3. Braking</p> <p>4.2.3.1. In an emergency, it must be possible to shut down the installation and/or the vehicles at any moment, under the most unfavourable conditions in terms of authorised load and pulley adhesion during operation. The stopping distance must be as short as the security of the installation dictates.</p> <p>4.2.3.2. Deceleration values must be within adequate limits fixed in such a way to ensure both the safety of the persons and the satisfactory behaviour of the vehicles, cables and other parts of the installation.</p> <p>4.2.3.3. In all installations there must be two or more braking systems, each capable of bringing the installation to a halt, and coordinated in such a way that they automatically replace the active system when its efficiency becomes inadequate. The traction cable's last braking system must act directly on the driving pulley. These provisions do not apply to drag lifts.</p> <p>4.2.3.4. The installation must be fitted with an effective clamp and locking mechanism to guard against premature restarts.</p>	<p>prEN 13223, clause 6 " Drive systems"</p> <p>prEN 12929-1, clause 10 " Drive systems (including brakes)"</p> <p>prEN 12929-1, clause 10.1 "Drive systems for funicular railways and aerial ropeways"</p> <p>prEN 13223, clause 6.2.3 "Recovery drive"</p> <p>prEN 13243, clause 5.6 "Emergency and evacuation drive" prEN 1909, clause 8 "Requirements for the recovery of the carriers"prEN 13223, clause 7 "Brakes"</p> <p>prEN 12929-1, clause 10.2 "Braking systems for funicular railways and aerial ropeways", clause 10.3 "Drive and braking systems for ski tows"</p> <p>prEN 13223, clause 7 "Brakes"</p>
	<p>prEN 13223, clause 7 "Brakes"</p> <p>prEN 12929-1, clause 10.2 "Braking systems for funicular</p>

Essential requirements	Draft standards
<p>4.3. Control devices The control devices must be designed and constructed so as to be safe and reliable, to withstand normal operating stresses and external factors such as humidity, extreme temperatures or electromagnetic interference and so as not to cause dangerous situations, even in the event of operational error.</p>	<p>prEN 13243, clause 4.2.2 "Safety measures", clause 5.2 "Safety functions and control devices"</p>
<p>4.4. Communication devices Suitable facilities must be provided to enable operational staff to communicate with one another at all times and to inform passengers in case of emergency.</p>	<p>prEN 13243, clause 11.3 "Internal telephone connections", clause 11.4 "Loudspeaker installation" prEN 1909, clause 7 "Requirements for informing the passengers"</p>
<p>5. Vehicles and towing devices</p>	<p>WI 00242023 and WI 00242024</p>
<p>5.1. Vehicles and/or towing devices must be designed and fitted out in such a way that under foreseeable operating conditions no person can fall out or encounter any other risks.</p>	<p>WI 0242023 clause 8.2.1, 8.5.1.1, 8.5.1.2, 8.5.1.6, 8.5.1.7 « cannot fall »</p> <p>Clause 6.6.1.2, 6.6.1.4, 6.7.8, 8.2.2.10, 8.2.3.3, 8.3.1.3, 8.5.1.5, 8.5.4.3, 8.7.5 « not to expose the passengers to danger»</p>
<p>5.2. The fittings of vehicles and towing devices must be dimensioned and constructed so as not to:</p> <ul style="list-style-type: none"> – damage the cable or – slip, except where slippage does not significantly affect the safety of the vehicle, the towing device or the installation, <p>under the most unfavourable conditions.</p>	<p>WI 0242023, clause 7 "End fixings of ropes and grips"</p>
<p>5.3. Vehicle doors (on cars, cabins) must be designed and constructed in such a way as to make it possible to close and lock them.. The vehicle floor and walls must be designed and constructed so as to withstand pressure and loads exerted by users under any circumstances.</p>	<p>WI 00242023, clause 8.3. " Cabin doors ", clause 6.3, 6.4, 6.5, 6.6, 6.7, 6.8 for calculations, actions, materials, construction principles and manufacturing tests</p>

Essential requirements	Draft standards
<p>5.4. If for reasons of operational safety an operator is required on board the vehicle, the vehicle must be fitted with the equipment required for him to carry out his tasks.</p>	<p>WI 0242023, clause 8.2.2.3 to 8.2.2.5 prEN 13243, clause 10.2 "Control console and control point", clause 11.1 "Carrier control system"</p>
<p>5.5. Vehicles and/or towing devices and, in particular, their suspension mechanisms must be designed and fitted so as to ensure the safety of workers servicing them in accordance with appropriate rules and instructions.</p>	<p>WI 0242023, clause 6.7.1 and 6.7.10</p>
<p>5.6. In the case of vehicles equipped with disconnectable fittings, all measures must be taken to bring to a halt , without risk to users, at the moment of departure,, any vehicle whose fitting has been incorrectly connected to the cable, at the moment of arrival, any vehicle whose fitting has not been disconnected , and to prevent the vehicle from falling.</p>	<p>WI 0242023, clause 7.3.3.1 prEN 12929-1, clause 5.4.3 prEN 13223, clause 9.2.6</p>
<p>5.7. Funicular vehicles and, insofar as the configuration of installation so permits, bicable cable cars must be equipped with an automatic braking device on the track, , when the possibility of carrier cable breaking cannot reasonably be excluded.</p>	<p>prEN 12929-1, clause 10.2.1</p>
<p>5.8. Where, all risk of derailment of the vehicle cannot be eliminated by other measures , the vehicle must be fitted with an anti-derailment device which enables the vehicle to be brought to a halt without risk to persons.</p>	<p>prEN 13107, clause 7.3.4.4 (by taking into account the consequences of a derailment of a vehicle of funicular railway on civil engineering works)</p>
<p>6. Equipment for users</p>	
<p>6.1 The access to embarkation areas and exit from disembarkation areas and the embarkation and disembarkation of users must be organised with regard to the movement and stopping of vehicles in such a way as to ensure the safety of persons, in particular in places where there is a risk of falling. It must be possible for children and persons with reduced mobility to use the installation safely if the installation is designed for the transport of such persons</p>	<p>prEN 12929-1, clause 11 " Passageways and work areas" prEN 12397, clause 6.3.2 "Handicapped people", clause 6.4.2 " Special rules (especially for transportation of children in chairlifts)"</p>

Essential requirements	Draft standards
7. Operability	
<p>7.1. Safety</p> <p>7.1.1. All technical provisions and measures must be taken to ensure that the installation is used for its intended purpose according to its technical specification and to the specified operating conditions and that the instructions on safe operation and proper servicing can be complied with. The instruction manual and the corresponding notes shall be drawn up in an official language or languages of the Community which may be determined in accordance with the Treaty by the Member State in the territory of which the installation is constructed</p> <p>7.1.2. The persons responsible for operating the installation must be provided with the appropriate material resources and must be qualified to carry out the task in hand.</p>	<p>prEN 12397 Operation</p> <p>prEN 12929-1, clause 14.8 "Operating and maintenance instructions"</p> <p>prEN 1709, clause 5.4 "Delivery of required documents to the operator"</p> <p>prEN 12397, especially clause 5.8 "Documents", clause 5.1 " Preliminary notes "</p> <p>prEN 12397, clause 5.2.4 "Requirements for the <u>operating personnel</u>", clause 5.2.1 "Tasks of the head of operation"</p>
<p>7.2. Safety in the event of immobilisation of the installation</p> <p>All technical provisions and measures must be adopted to ensure that users can be brought to safety within a set time appropriate to the type of installation and its surroundings when the installation is immobilised and cannot be restarted quickly.</p>	<p>prEN 1909 Recovery and evacuation</p> <p>WI 0242023, clause 8.2.2.6 to 8.2.2.8 for cabins, clause 8.5.1.4 design for chairs.</p>

Essential requirements	Draft standards
<p>7.3. Other special provisions concerning safety</p> <p>7.3.1. Operators' stands and workplaces Movable parts which are normally accessible in the stations must be designed, constructed and installed in such a way as to preclude any risks or, where such risks exist, be fitted with protective devices so as to prevent any contact with parts of the installation which may cause accidents. These devices must be of a type that cannot easily be concealed or rendered inoperative.</p> <p>7.3.2. Risk of falling Workplaces and working areas, including those used only occasionally, and the access to them must be designed and constructed in such a way as to prevent persons required to work or move in them from falling. Should the construction not be adequate, they must also be provided with anchorage points for personal protective equipment to prevent falls.</p>	<p>prEN 12397, clause 5.4.2 "<u>Worker protection</u>", clause 5.6 "Personal safety during start-up"</p> <p>prEN 12929-1, clause 4.3 "General work safety requirements", clause 11 "Passageways and work areas"</p> <p>prEN 13223, clause 12 "Accident prevention and protection of employees"</p> <p>prEN 13107, clause 13 "Work safety"</p>