

Application Regulation EN 1090

TRA 1090 Revision 01

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Application Regulation

EN 1090 Voluntary certification

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1 Object of the present regulation

The present Application Regulation is part of the documents ruling the voluntary certification of the Factory Production Control (**FPC**) in the fields covered by steel construction as defined in the General regulation ARG 1090, namely:

1. the certification of FPC without fabrication operation¹
2. the disclosure on relevant specific information regarding the CE-certified FPC in a specific certificate²
3. parts of the certified FPC exerted outside the premises of the manufacturer³

It deals with the technical requirements.

¹ This part of the present voluntary certification covers all the parts of the FPC defined by EN 1090-1 completed by the requirements of EN 1090/2-3 that involve neither structural design nor any fabrication operation but include activities of procurement, identification, transportation, handling and storage and delivering to the customer of products processed as such.

² With regard to the newly imposed limitation on the content of information liable to be written in the CE-certificate, this bears on the disclosure on a separate certificate of information among others on processed steel grades, applied welding processes, responsible welding coordinator.

³ This relates to the application of an FPC according to EN 1090 for activities exerted on the construction site on components already placed onto the market and fitted with a declaration of performance. This part is not covered in the present version of the application regulation.

2 FPC to be applied by the certified manufacturer

2.1 General

The manufacturer shall establish, document and maintain a factory production control (FPC) system to ensure that products delivered to the customer conform to the declared performance characteristics.

The FPC system shall consist of written procedures, regular inspections and tests and/or assessments and the use of results to control the component's constituent products, equipment, the production process and the manufactured component.

The results of inspections, tests and assessments stated in the manufacturer's FPC system shall be recorded. The action to be taken if control values or criteria are not met shall be recorded and retained for the period specified in the manufacturer's FPC procedures.

The responsibility, authority and the relationship between personnel that manage, perform or verify work affecting product conformity, shall be defined. This applies in particular to personnel that need to initiate actions preventing product non-conformity from occurring, actions in case of non-conformities and to identify and register any conformity problems.

The FPC system shall describe measures to ensure that personnel involved in activities influencing the conformity of the components have adequate qualifications and training for the range of products purchased, processed and sold by the manufacturer.

Measuring equipment influencing the conformity of the components shall be calibrated and regularly inspected according to documented procedures, frequencies and criteria, it shall be regularly inspected and maintained.

The manufacturer shall implement a written inspection procedure for checking and recording that constituent products conform to the specification, and for tracing that they are correctly identified, handled and stored.

The requirements for traceability of constituent products given in EN 1090-2 and EN 1090-3 shall be complied with.

The manufacturer shall establish procedures to ensure that the declared values and classes of all of the characteristics for the constituent products are maintained.

The control of characteristics and the frequency shall be in accordance with Table 1 hereunder.

Characteristic	Evaluation method	Frequency
Tolerances on shape and dimensions	Actual testing of specimens from a batch	In cases of doubt
Yield strength	Documentary checks of all constituent products used in manufacture For CE-marked products, check of the declarations of performance. For all products check of the inspection documents	For Each Purchased Batch of product.
Tensile strength		
Elongation		
Fracture toughness		
Weldability		
Durability		

Table 1: Controls by the manufacturer

The manufacturer shall have written procedures that specify how to deal with non-conforming products. Such events shall be recorded as they occur, and these records shall be kept for the period defined in the manufacturer's written procedures. The procedures shall conform with EN 1090-2 or EN 1090-3 as appropriate.

2.2 Specificities of FPC without fabrication operation

2.2.1 General

The manufacturer shall have procedures that ensure that activities of procurement, identification, transportation, handling and storage are duly applied to all constituent products eligible to EN 1090 standards whether or not these products will be submitted to manufacturing operations.

2.2.2 Procurement

Definitions and requirements of EN 10021 shall apply together with those of the relevant European product standard. Constituent products shall be selected from the relevant European Standards listed in EN 1090-2. Constituent products that would not be covered by the standards listed in EN 1090-2, shall be specified in terms of the following properties:

- a) strength (yield and tensile);
- b) elongation;
- c) stress reduction of area requirements (STRA), if required;
- d) tolerances on dimensions and shape;
- e) impact strength or toughness, if required;
- f) heat treatment delivery condition;

g) through thickness requirements (Z-quality), if required;

h) limits on internal discontinuities or cracks in zones to be welded, if required.

In addition, if the steel is to be welded, its weldability shall be declared as follows:

i) classification in accordance with the materials grouping system defined in CEN ISO/TR 15608 or;

j) a maximum limit for the carbon equivalent of the steel, or;

k) a declaration of its chemical composition in sufficient detail for its carbon equivalent to be calculated.

The properties of supplied constituent products shall be documented in a way that enables them to be compared to the specified properties. Their conformity with the relevant product standard shall be checked in accordance with EN 1090-2 through declarations of performance issued by the manufacturers of products covered by a harmonised standard. For metallic products, the inspection documents according to EN 10204 shall be as listed in EN 1090-2. For structural bolting assemblies and other fasteners, inspection documents according to the EN ISO 16228 series may be used instead of documents according to EN 10204.

The manufacturer shall ensure that the elaboration of model declarations of performance is part of the FPC to be certified, that these models are compiled in a specific chapter of the FPC file and that declarations of performance issued by manufacturers of constituent products not corresponding to the models shall be declared either as invalid or not eligible on basis of the following criteria:

- Criterion for invalidity is an infringement of the content of the declaration of performance with regards to the requirements of the harmonised standard now in force.
- Criterion for non-eligibility is a significant gap between the content of the declaration of performance of a given producer with regard to the model declaration of performance.

The manufacturer shall ensure that these model declarations of performance are made available to their customers, in line with the obligations of distributors mentioned in article 14 of CPR.

Regarding inspection documents according to EN 10204, the manufacturer shall ensure that the right application of article 6 of EN 10204 (see ARG 1090) is part of his FPC.

The manufacturer shall establish a declaration of conformity for the right application of his FPC as regards the present voluntary certification and application regulation. The model of that declaration of conformity is reproduced in clause 8.

That declaration of conformity may be published on the website of the manufacturer, it may accompany the delivery documents, it **may** be referred to in the accompanying delivery documents.

2.2.3 Handling and storage

Constituent products shall be handled and stored in conditions that are in accordance with product

manufacturer's recommendations. A constituent product shall not be used beyond a shelf life specified by its manufacturer. Products that have been handled or stored in a way or for a length of time that could have led to significant deterioration shall be checked before use to ensure that they still comply with the relevant product standard. Structural steel components shall be packed, handled and transported in a safe manner, so that permanent deformation does not occur and surface damage is minimized. Handling and storage preventive measures specified in the list of handling and storage preventive measures hereunder shall be applied as appropriate.

2.2.3.1 Lifting

1. Protection of components from damage at the lifting points
2. Avoidance of single point lifting of long components by use of spreader beams as appropriate
3. Bundling together lightweight components particularly prone to edge damage, twisting and distortion if handled as individual items. Care taken to avoid localized damage where component touch each other, to unstiffened edges at lifting points or other zones where a significant proportion of the weight of the bundle is imposed on a single unreinforced edge

2.2.3.2 Storage

4. Stacking of manufactured components stored before transportation or erection clear of the ground to be kept clean
5. Necessary supports to avoid permanent deformations
6. Storage of profiled sheeting, and other materials supplied with pre-finished decorative surfaces according to the requirements of relevant standards

2.2.3.3 Protection against corrosion

7. Avoidance of accumulation of water together with precautions in order to avoid the penetration of moisture into bundles of sections with metallic precoatings
8. In case of prolonged open storage on site, the bundles of sections should be opened and the sections separated to avoid the occurrence of 'black or white rust'.

2.2.3.4 Stainless steels

9. Handling and storage of stainless steel to prevent contamination by fixtures or manipulators etc. Careful storage of stainless steel, so that the surfaces are protected from damage or contamination
10. If appropriate, use of protective film or other coating, to be left on as long as practicable
11. Avoidance of storage in salt-laden humid atmospheres
12. Protection of storage racks by suitable wooden, rubber or plastic battens or sheaths to avoid carbon steel, copper-containing, lead etc. rubbing surfaces
13. Use of markers containing chloride or sulphide prohibited, an alternative is to use protective film and apply all marks only into this film.

14. Protection of stainless steel from direct contact with carbon steel lifting tackle or handling equipment such as chains, hooks, strapping and rollers or the forks of fork lift trucks by use of isolating materials or light plywood or suction cups. Use of appropriate erection tools to ensure that surface contamination does not occur
15. Avoidance of contact with chemicals, including dyes, glues, adhesive tape, undue amounts of oil and grease. If it is necessary to use them, their suitability is to be checked with their manufacturer.
16. Use of segregated manufacturing used for carbon steel and stainless steel to prevent carbon steel pick-up. Use of separate tools dedicated for use with stainless steel only, particularly grinding wheels and wire brushes. Wire brushes and wire wool of stainless steel, preferably an austenitic grade

2.2.3.5 Transport

- 17 Special measures needed for protecting manufactured components in transit

2.3 Disclosure on relevant specific information

The manufacturer shall ensure that his FPC fully contains all information relevant to the exerted activities, among others:

- The processed steel grades with regards to the relevant standards including the minimum and maximum dimensions (thickness) of the eligible products,
- The applied welding processes including the relevant qualifications in terms of types of joints, thicknesses and grades of constituent products and welders,
- The Responsible Welding Coordinator(s) including the qualification as defined in EN 1090 and in EN ISO 14731 and as delivered according to documents IAB 252⁴ and EWF-652r3-14/SV-00⁵.

2.4 Activities exerted outside the premises of the manufacturer

This part is not covered in the present version of the application regulation.

The basic principles are that the manufacturer does ensure that his FPC fully contains all information relevant to the activities exerted on the construction site such as among others: sawing, thermal cutting, boring, welding, mechanical fastening, thermal spraying, painting. The manufacturer must have written procedures to declare and ensure that his FPC according to EN 1090 was applied totally so as to ensure the validity and continuity of the previously performances achieved in the manufacturing plants.

⁴ IAB-252r3-16/SV-02, IIW Guideline for International Welding Engineers, Technologists, Specialists and Practitioners, Personnel with Qualification for Welding Coordination, Minimum Requirements for the Education, Examination and Qualification

⁵ EWF Guideline Dedicated Knowledge for Personnel with the Responsibility for Welding Coordination to comply with EN 1090-2, Minimum Requirements for the Education, Training, Examination and Qualification

The detailed modalities are not dealt with in the present version of the application regulation.

3 Requested execution class (EXC)

3.1 Certification of FPC including no fabrication operation

The requested execution class applicable in the frame of the present certification corresponds to the requirements of EN 1090-2/3, namely a full traceability for EXC3 and EXC4 applicable if inspection documents 3.1 (or 3.2) are required. For inspection documents 2.2, which are based on a non-specific inspection, an EXC2 is requested.

3.2 Disclosure on relevant specific information and activities regarding the CE-certified FPC

The requested execution class applicable in the frame of the present certification corresponds to the criteria of EN 1090-2/3.

3.3 Activities exerted outside the premises of the manufacturer

The requested execution class applicable in the frame of the present certification corresponds to the criteria of EN 1090-2/3.

4 Tasks covered by the certification body

The tasks object of the present certification include audits of companies that are carried out together with those related to the CE-certification according to EN 1090 according to the application regulation OPAC EN 1090⁶, whose last edition is in force.

4.1 Tasks devoted to the certification of FPC without fabrication operations

This part of the scope of the present voluntary certification covers all the tasks part of the FPC including activities of procurement, identification, transportation, handling and storage and placing onto the market of products processed as such. This part of the scope is till now already audited in the framework of the CE EN 1090 certification and includes among others:

4.1.1 Synthetic checklist concerning factory production control

What part of EN 1090 is applied to the execution?	EN 1090-2 / -3
Who is the person responsible for the factory production control system? How is he/she integrated into the organisation? E.g. organisation chart, responsibility matrix, job descriptions or qualification profiles	Name: Organogram:
Constituent products, are declarations of performance available, if eligible?	YES / NO

⁶ "OPAC", now acronym for historic abbreviation of "Operating Procedure for the Attestation of Conformity"

Constituent products, are material certificates available?	YES / NO
Have the retraceability and appropriate documentation been ensured?	YES / NO
How are the constituent products stored	YES / NO
Are the marking/identification and retraceability ensured during the storage and fabrication periods?	YES / NO
Are subcontracting measures taken?	YES / NO
Have specifications and selection criteria for sub-suppliers been stipulated?	YES / NO
Are the necessary documents made available to the sub-supplier?	YES / NO
Non-conforming products, have measures been stipulated for how to proceed in the event of a lack of compliance with stipulated requirements?	YES / NO

4.1.2 Handling and storage of the constituent products and the structural components

Item	Appraisal
Protection of components from damage at the lifting points	
Avoidance of single point lifting of long components by use of spreader beams as appropriate	
Bundling together lightweight components particularly prone to edge damage, twisting and distortion if handled as individual items. Care taken to avoid localized damage where component touch each other, to unstiffened edges at lifting points or other zones where a significant proportion of the weight of the bundle is imposed on a single unreinforced edge	
Stacking of manufactured components stored before transportation or erection clear of the ground to be kept clean	
Necessary supports to avoid permanent deformations	
Storage of profiled sheeting, and other materials supplied with pre-finished decorative surfaces according to the requirements of relevant standards	
Avoidance of accumulation of water together with precautions in order to avoid the penetration of moisture into bundles of sections with metallic precoatings	
In case of prolonged open storage on site, the bundles of sections should be opened and the sections separated to avoid the occurrence of 'black or white rust'.	
Handling and storage of stainless steel to prevent contamination by fixtures or manipulators etc. Careful storage of stainless steel, so that the surfaces are protected from damage or contamination	
If appropriate, use of protective film or other coating, to be left on as long as practicable	
Avoidance of storage in salt-laden humid atmospheres	
Protection of storage racks by suitable wooden, rubber or plastic battens or sheaths to avoid carbon steel, copper-containing, lead etc. rubbing surfaces	
Use of markers containing chloride or sulphide prohibited, an alternative is to use protective film and apply all marks only into this film.	
Protection of stainless steel from direct contact with carbon steel lifting tackle or handling equipment such as chains, hooks, strapping and rollers or the forks of fork lift trucks by use of isolating materials or light plywood or suction cups. Use of appropriate erection tools to ensure that surface contamination does not occur	
Avoidance of contact with chemicals, including dyes, glues, adhesive tape, undue amounts of oil and grease. If it is necessary to use them, their suitability is to be checked with their manufacturer	
Use of segregated manufacturing used for carbon steel and stainless steel to prevent carbon steel pick-up. Use of separate tools dedicated for use with	

stainless steel only, particularly grinding wheels and wire brushes. Wire brushes and wire wool of stainless steel, preferably an austenitic grade	
Special measures needed for protecting manufactured components in transit	

4.1.3 Form of eligibility of a supplier of products

This form is appended to the present regulation in the form of an EXCEL file. This file defines criteria of eligibility for various products. The auditors of OCAB-OCBS are charged to apply it to constituent products used by the company certified at the time of each mission of inspection, at a rate of five to ten products according to the total volume of supply.

The fact is that auditing of these activities already bears on **all constituent products present in the premises of the manufacture and eligible to activities according to EN 1090**, whether or not these products will be submitted to manufacturing operations.

The auditing also bears with the examination of model declarations of performance, of inspections documents and of declarations of conformity of the manufacturer.

4.2 Tasks devoted to the disclosure on relevant specific information

The audits check whether the specific information is accurate and kept up to date.

That specific information is then referred to in the certificate of voluntary certification.

4.3 Tasks devoted to activities exerted outside the premises of the manufacturer

This part is not covered in the present version of the application regulation. The basic principles are that the audit devotes special attention to the procedures describing among others handling and storage on site, valid qualifications of the personnel to operate on site as specially control equipment applicable on site. The detailed modalities are not dealt with in the present version of the application regulation.

5 Frequency of audits

5.1 Certification of FPC without fabrication operation

Audits include physical audits in the premises of the manufacturers carried out at least once a year.

5.2 Disclosure on relevant specific information regarding the CE-certified FPC in a specific certificate

The frequency of audits is in phase with the requests of EN 1090-1 unless otherwise imposed by position papers of the Group of Notified Bodies. Audits include physical audits in or outside the premises of the manufacturers or documentary audits by a declaration of veracity dated and signed by the manufacturer. Documentary audits are at least carried out once a year.

5.3 FPC exerted outside the premises of the manufacturer

This part is not covered in the present version of the application regulation.

6 Description of the scope covered by a certified company

The data describing the scope covered by a certified company are mentioned in a specific certificate whose model is reproduced in clause 7.

7 Model of voluntary Certificate of Conformity (Coc)

The document issued by OCAB-OCBS is reproduced hereunder.

Depending on its content, the certificate is split into independent parts, not all necessarily filled nor published.

OCAB-OCBS Voluntary Certification Certificate of conformity

OCAB-OCBS-«N»

This certificate attests that all provisions concerning the application of a factory production control as specified in OCAB-OCBS certification regulations ARG 1090, BRP 1090 and TRA 1090¹ are applied by

«Cy»

«Street»

«Town»

In its plants of

«Plants»

for constituent products described hereinafter about the activities of procurement, identification, transportation, handling, storage and delivering to the customer are applied as required in EN 1090-2(3) standards.

Constituent products:

Steel grades S235, S275, S355, S460 according to

EN 10025-1 to -5,

EN 10210-1

EN 10219-1.

Stainless steel according to EN 10088, groups .. & .. according CR ISO 15608

Applicable Execution classes:

- EXC2 for materials requesting a 2.2 document according to EN 10204
- EXC3 for materials requesting a 3.1 or 3.2 document according to EN 10204

Brussels, «Date»

Jacques DEFORNY, Chairman of the Board

The validity of the present certificate is confirmed if visible on the OCAB-OCBS website

¹ ARG: General Regulation, BRP: Particular Regulation, TRA: Application Regulation

Figure 7-1 CoC FPC Materials

OCAB-OCBS

Voluntary Certification

Welding Certificate

OCAB-OCBS-«N»

This Welding Certificate is a voluntary annex to the Certificate of Conformity 2+
of the Factory Production Control (FPC) 1148 - CPR – «N» of

«Cy»

«Street»

«Town»

In its plants of

«Plants»

for constituent products described hereabove about the activities of welding as
required in EN 1090-2(3) standards.

Welding processes according to EN ISO 4063:2010

111 manual metal arc welding

114 self-shielded tubular cored arc welding

121 submerged arc welding with solid wire electrode

121-2 submerged arc welding with 2 solid wire electrodes (twin-arc, tandem)

135 metal active gas (MAG) welding with solid wire electrode

136 metal active gas (MAG) welding with flux cored electrode

138 metal active gas (MAG) welding with metal cored electrode

783 drawn arc stud welding with ceramic ferrule or shielding gas

Responsible Welding Coordinators according to EN ISO 14731.

- Mr. N.N., International Welding Engineer (IWE), for EXC 1 up to 4
- Mr. N.N., International Welding Technologist (IWT), for EXC 1 up to 3,
- Mr. N.N., International Welding Specialist (IWS), for EXC 1 up to 2

Brussels, «Date»

Jacques DEFOURNY, Chairman of the Board

The validity of the present certificate is confirmed if visible on the OCAB-OCBS website

OCAB OCBS Website : www.ocab-ocbs.com
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Figure 7-2 WC FPC Welding

This part is not covered in the present version of the application regulation.

Figure 7-3 CoC FPC Onsite

8 Model of voluntary Declaration of Conformity (DoC)

The two-page document issued by the manufacturer is reproduced hereunder.

Depending on its content, the certificate is split into two independent parts, not all necessarily filled nor published.

Logo and Name of Certified Company

Declaration of conformity

This declaration of conformity attests that all provisions concerning the application of a factory production control about the activities of procurement, identification, transportation, handling, storage and delivering to the customer as required in EN 1090-2(3) standards are applied for constituent products described hereinafter:

Constituent products:

Steel grades S235, S275, S355, S460 according to

EN 10025-1 to -5,

EN 10210-1

EN 10219-1.

Stainless steel according to EN 10088, groups .., .. & .. according CR ISO 15608.

This factory production control is the result of a 1090 voluntary certification by OCAB-OCBS ruled in documents ARG 1090, BRP 1090 and TRA 1090 and certified in document

OCAB-OCBS-«N»

The above-mentioned certificate is granted to:

«Cy»

«Street»

«Town»

In its plants of

«Plants»

«Date»

Signed by,

Annexes:

- Model declarations of performances for the above-mentioned products

Co-ordinates of Certified Company

Figure 8-1 DoC FPC Materials

This part is not covered in the present version of the application regulation.

Figure 8-2 DoC FPC Operations

9 Summary table

Applicability and relevance of the certificates and declarations of conformity (clauses 7 and 8)

Certificate of conformity (CoC) and Declarations of conformity (DoC)					
Manufacturer ⁷ (defined in 2.1)	Figure 7-1 CoC FPC Materials	Figure 7-2 WC FPC Welding	Figure 7-3 CoC FPC Onsite	Figure 8-1 DoC FPC Materials	Figure 8-2 DoC FPC Operations
a-manufacturer ⁸ (sole distributor)	YES	NO	NO	YES	NO
b-manufacturer ⁹ (CE certified)	Optional *	Optional **	Optional ***	NO	NO *
* if not included in CE-certificate					
** if welding operations					
*** if operations on site (not					

10 History of revisions

10.1 Revision 0, creation

⁷ CPR, Article 2, 19: 'manufacturer' means any natural or legal person who manufactures a construction product or who has such a product designed or manufactured, and markets that product under his name or trademark;

⁸ As explained in ARG 1090, **a-Manufacturers** have the task to minimise the modifications on the constituent product so that their initial declaration of performance issued by the producer remains valid.

⁹ As explained in ARG 1090, **b-Manufacturers** apply fabrication processes on the constituent product that will induce modifications of the constituent product (for instance by punching or welding), the aim is to control those modifications so that the performance of the fabricated component may be declared in a new document (namely a DoP according to EN 1090).