



CE Marking & Construction Product Regulations 2013

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www.parkersteel.co.uk

CONSTRUCTION PRODUCT REGULATIONS 2013

Introduction from Guy Parker, Managing Director, ParkerSteel

Dear Customer,

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With effect from the 1st July the Construction Products Regulations 2013 (CPR) come into force in the United Kingdom. This places legally binding obligations on everyone in the supply chain from this date. This will apply in 2 parts.

- 1. The first relates to constituent Structural Steel Products used in construction and is effective from 1st July 2013
- 2. The second part relates to Fabricated Structural Steel Components used in construction and is effective from 1st July 2014

The CPR can be a complex and daunting process to comprehend and implement and has wide ranging implications for fabricators, their subcontractors and suppliers who are all required to comply.

This document is intended to help anyone, affected by this change in legislation, understand the requirements, the timetable for implementation, how compliance can be achieved and how we at ParkerSteel can help you in achieving and maintaining your compliance.

ParkerSteel are the first (and only, at the time of writing) steel distributor and processor in the United Kingdom to be fully complaint for CE marking with ISO 9001 accreditation and full Factory Production Control (FPC) to meet the requirements of BS EN 1090-2 systems and are approved by a Notified Body (Steel Construction Certification Scheme)

We are fully compliant with the BCSA standard conditions of supply and the National Structural Steelwork Specification V5 CE Marking Version when requesting Execution Class 2 or higher

I hope you find this publication helpful and if you have any further questions please do not hesitate to contact your normal Relationship Manager, who will be delighted to help.

Yours Sincerely

Guy Parker

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PART 1 - CONSTRUCTION PRODUCTS REGULATIONS AND CONSTITUENT PRODUCTS 1ST JULY 2013

1.0 INTRODUCTION

The Construction Product Regulations 2013 (CPR) come into force on 1st July 2013 in the United Kingdom for the supply of structural steel products.

This requires that structural construction products "placed on the market" (available for sale) after 1st July 2013 are CE marked to indicate appropriateness for use in construction in the European Union where a <u>European Harmonised Standard (hEN)</u> or European Technical Assessment (ETA) exists for the product. It places duties upon Importers, Distributors and Manufacturers to ensure that these CE marking and associated obligations are met.

CE Marking applies to components for incorporation in the vast majority of steel structures including buildings, bridges, towers and masts and has implications for all steelwork contractors, steel stockholders, service centres and distributors. It also applies to manufacturers of light-gauge purlins, decking and sheeting and the manufacturers of proprietary products including cellular beams etc. It also has implications for galvanizers and steel benders.

1.1 COMMONLY USED "CE" PRODUCTS IN STEELWORK

For steelwork, the main harmonised product standards are:

•	Steel Sections and Plates	BS EN 10025-1;
•	Hollow Sections	
	o Hot Finished	BS EN 10210-1
	o Cold Formed Welded	BS EN 10219-1;
•	Stainless Steels	
	o Sheet, Plate & Strip	BS EN 10088-4
	o Bars, Rods, Wire, Sections and Bright Products	BS EN 10088-5
•	Aluminium	BS EN 15088-1
•	High Strength Structural Bolting Assemblies for Preloading	BS EN 14399-1;
•	Non-Preloaded Structural Bolting Assemblies	BS EN 15048-1;
•	Fabricated Structural Steelwork	BS EN 1090-1
•	Welding Consumables	BS EN 13479

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1.2 CE MARKING

A "CE" mark indicates that a product is consistent with its Declaration of Performance (DoP) as made by the manufacturer. Marking may be on the product, delivery paperwork or other as appropriate.

By making a DoP the Importer, Distributor or Manufacturer is assuming legal responsibility for the conformity of the product with its declared performance.

Importer, Distributor and Manufacturer are defined as follows

- Manufacturer 'Means any natural or legal person who manufacturers a construction product or who has such a product designed or manufactured and markets that product under his name or trademark'
- Distributor 'Means any natural or legal person in the supply chain, other than the manufacturer or the importer, who makes a construction product available on the market'
- Importer 'Means any natural or legal person established within the Union, who places a construction product from a third country on the Union market'

Other obligations also apply to the Manufacturer, Importer and Distributor and include the following

- Keep records of all products placed on the market for a minimum period of 10 years.
- Keep a record of all complaints and non-conformance that relate to a product
- Take immediate corrective action if a product is found to be non-conforming
- Make available all relevant documentation whenever a sale is made

1.3 CPR OFFICIAL LINKS AND GUIDANCE

Official link to the EU Construction Product Regulation <u>http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2011:088:0005:0043:EN:PDF</u>

UK's "Product Contact Point for Construction" as required by the CPR <u>http://www.planningportal.gov.uk/buildingregulations/buildingpolicyandlegislation/cpr</u>

Detailed guidance on the CPR

http://www.constructionproducts.org.uk/publications/industry-affairs/display/view/constructionproducts-regulation/

Additional information is also available from the Steel Construction website http://www.steelconstruction.org/

1.4 FABRICATED STEEL PRODUCTS

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The CPR also requires that Fabricated Steel Products are CE marked after 1st July 2014 (12 months later) when the European Harmonized Standard for fabricated steel products BS EN 1090-1 and BS EN 1090-2 come into force. However all products used in the manufacture of fabricated steel work after the 1st July 2013 must be supplied as CE compliant in line with the CPR regulations. This includes all structural steel, welding consumables and structural fixings. CE Marking of Fabricated products is covered in Section 2.

1.5 EXECUTION CLASS (EXC)

BS EN1090-2 introduces the concept of execution class. This enables specifiers to select the level of quality management suitable for the construction product.

Execution Class	System Level	Type Of Work Undertaken	Test Cert Level
EXC1	Elementary Quality System	Farm Buildings	N/A
EXC2	Standard Quality System	Buildings	2.2/3.1
EXC3	Comprehensive Quality System	Bridges, Stadia etc	3.1
EXC4	Comprehensive Quality System	Special Structures*	3.1/3.2
		*Power Statio	ns, Long Span Bridgeworks etc

Specification of an Execution Class (EXC) for steel structures is a new concept within the steel construction industry. In BS EN 1090-2 these range from Execution Class 1 to Execution Class 4 (EXC1, EXC2, EXC3 and EXC4). The strictness of requirements increases from EXC1 to EXC4.

The choice of execution class is a design issue where each class is based on the criticality of a structure in terms of its service conditions and the consequence of its failure. However, whilst the designer is responsible for determining the required execution class, to enable CE Marking of its fabricated steelwork, a steelwork contractor must declare and demonstrate its capability to produce a structure that will conform to a specified execution class.

All material supplied with a CE mark must be supplied to an Execution Class with effect from 1st July 2013. The purchaser must specify the Execution Class required from the supplier.

The importance of a steelwork contractor declaring the correct Execution Class for its range of fabricated steelwork cannot be overstated, since this not only impacts on the stringency of the systems and competency of personnel used to implement and control its manufacturing operations but also the work to be tendered for. A steelwork contractor declaring conformance to a particular Execution Class can undertake work in a lower class but not to a higher class.

Further guidance on the selection of Execution Class is given in the BCSA guide to CE Marking of Structural Steelwork publication available for download here: http://parkersteel.net/steel/media/pdf/literature/Steel construction CE Marking.pdf

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A full list of harmonised standards can be found on the EU's Nando website www.ec.europa.eu/enterprise/newapproach/nando/index.cfm?fuseaction=cpd.hs

The harmonised product standards establish common test methods and reporting styles for declaring the essential characteristics of a product in the information accompanying CE Marking - for example the required yield strength of nominal S275 steels reducing with thickness. They also define the test methods and the testing frequency if sampling is to be adopted.

There are seven 'essential requirements' that apply to all civil engineering works, these are listed below:

- 1. Mechanical resistance and stability
- 2. Safety in case of fire
- 3. Hygiene, health and the environment
- 4. Safety and accessibility in use
- 5. Protection against noise
- 6. Energy economy and heat retention
- 7. Sustainable use of natural resources

These essential requirements derive from a comparison of what public safety provisions are included in the building and construction regulations of the EU's member states. In essence, meeting the provisions should ensure that the products meet the regulatory requirements of all EU member states, including, for instance, the provisions on materials and workmanship in Regulation 7 of the Building Regulations applicable to England and Wales.

For steel products and ancillaries only mechanical resistance, stability and safety in case of fire apply. The harmonised product standards break down these general requirements into specific measurable properties termed essential 'performance characteristics' (e.g. yield strength, toughness and load bearing capacity) and establishes the values to be met.

1.7 IDENTIFICATION, INSPECTION AND DOCUMENTATION

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Under the CPR, documents will be supplied to verify that the information on the products supplied matches those ordered.

- These documents include inspection certificates, test reports, declaration of compliance and declaration of performance (DOP) as relevant for plates, sections, hollow sections, welding consumables, mechanical fasteners, studs etc.
- This documentation check is intended to obviate the need for testing products generally.

Specific testing of products unless otherwise specified is not required.

For compliance with BS EN1090-2 (CE Marking of Fabricated Steelwork) inspection documents to EN 10204 are required as follows.

- Structural Steel to S355J0 3.1 Type Certification
- Stainless Steel 3.1 Type Certification
- Structural Bolt Assemblies 2.1 Type Certification
- Welding Consumables 2.2 Type Certification

BS EN 10025 requires full CEV values to be included and these are available on 3.1 / 3.2 type Test Certificates

For EXC3 and EXC4 constituent products will require full traceability at all stages from receipt to handover of the works.

Manufacturers of structural steel products provide a declaration that their products conform to the specified properties (yield strength, tensile strength, elongation etc) by supplying either a Type 2.2 'Test Report' or a Type 3.1/3.2 'Inspection Certificate' (formally called Test Certificates) in accordance with BS EN 10204.

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• INSPECTION CERTIFICATE 2.1 "type 2.1"

Statement of compliance with the order by the manufacturer.

Type 2.1 Certificates declares the manufacturers compliance to the standard the product is produced to but does not specifically inspect the product and does not normally include any test/sample results or CEV Values.

• INSPECTION CERTIFICATE 2.2 "type 2.2"

Statement of compliance with the order by the manufacturer based on non-specific inspections (tests) by the manufacturer.

The Type 2.2 Test Report is a declaration by the manufacturer that its product results are 'typical' of product characteristics for that particular product type. Tests results are supplied on the certification based on initial type testing or sampling, but are not specifically tests on the material being supplied. This is formally referred to as "non specific testing", and as such does not include Chemical Analysis or CEV values required for welding or galvanising.

• INSPECTION CERTIFICATE 3.1 "type 3.1"

Statement of compliance with the order by the manufacturer with results of specific inspection A Type 3.1 Test Cert is a declaration by the manufacturer that the products supplied are in compliance with the specifications supported by test results. The information given on a Type 3.1 Inspection Certificate are actual test results from the material in the lot/batch from which the steel products have been supplied (formally referred to as "specific testing"). The test unit and the tests to be carried out are defined by the product specification, the official regulation and corresponding rules and/or the order.

A 3.1 Inspection Certificate is approved only by the manufacturers own representative who has to be independent from the manufacturing process (Test House Manager). Full Chemical Analysis is provided from the Mill from the cast the product was produced from, including CEV values

• INSPECTION CERTIFICATE 3.2 "type 3.2"

Statement of compliance with order with indication of results of specific inspection

A Type 3.2 Test Cert expands on 3.1 with the addition that the inspection document is also authorised by an independent 3rd party inspector designated by the official regulations and in which they declare that the testing and inspection process required by the specifications have been fully complied with.

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PART 2 - CONSTRUCTION PRODUCTS REGULATIONS AND FABRICATED STEELWORK 1ST JULY 2014

2.0 INTRODUCTION

In order to be able to CE Mark the fabricated structural steelwork that they produce, steelwork contractors are required to declare performance to the System 2+ level of assessment (as described in Annex V of the CPR[1]). This requires them to undertake:

- Initial type-testing of the product
- Factory Production Control (FPC), which will include
 - o implementation of FPC system procedures
 - o appointment of a responsible welding coordinator (RWC)
 - o implementation of welding quality management system (WQMS) procedures
 - o further testing of samples taken at the factory in accordance with the prescribed test plan

They must also be assessed by a notified body that will carry out:

- Initial inspection of the manufacturing plant
- Initial inspection of the FPC
- Continuous surveillance, assessment and approval of the FPC, which will typically include:
 - o an annual audit to ensure continued competence to the declared Execution Class (Table B.3 of BS EN 1090-1[8] sets out minimum levels for the routine surveillance intervals)

The notified body will then issue a FPC certificate and Welding Certificate identifying the Execution Class that the steelwork contractor is approved to.

2.1 CE MARKING OF FABRICATED PRODUCTS

Contracts for fabricated structural steelwork to be delivered to site on or after 1st July 2014 must be CE certified. This certification includes the obligations of BS EN 1090-1 and BS EN 1090-2 on the steelwork contractor. It will therefore be a legal requirement for all fabricated structural steelwork delivered to site from that date to be CE Marked.

BS EN 1090-1 requires that ALL structural material supplied conforms to BS EN 1090-2. The BCSA have developed a specific structural steel work specification for CE marking (NSSS V5 CE Marking Version) that incorporates the requirements of BS EN 1090-2. This requires that ALL Importers, Distributors, Manufactures and Fabricators who change the original properties of a structural component are CE approved by an independent nominated body with a Factory Production Control System (FPC) and an ISO 9001 or equivalent quality system.

Changing the original properties includes but is not limited to, Shotblasting, Painting, Cutting, Cold Forming, Drilling, flame cutting, bending, rolling, marking welding etc.

BS EN 1090-1 and BS EN 1090-2 require that ALL structural material supplied conforms to BS EN 1090-2 including NSSS V5 CE Marking Version and that all fabricated products comply in a similar manner. This will require that ALL Importers, Distributors, Manufactures and fabricators who change the original properties of a structural component are CE approved by an independent nominated body with a Factory Production Control System (FPC) and an ISO 9001 or equivalent quality system.

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BS EN 1090-1 is the harmonised standard covering fabricated structural steelwork and covers the execution of steel structures and aluminium structures. Copies of the BS EN 1090-1 & 2 are available from the British Standards website <u>http://shop.bsigroup.com/</u>

Part 1 of the standard is the Requirements for Conformity Assessment of Structural Components. It describes how manufacturers can demonstrate that the components they produce meet the declared performance characteristics (the structural characteristics which make them fit for their particular use and function).

Part 2 is the Technical Requirements for Steel Structures. It specifies the requirements for the execution of steel structures to ensure adequate levels of mechanical resistance and stability, serviceability and durability. It determines the performance characteristics for components that the manufacturer must achieve and declare through the requirements of Part 1. It also covers other activities such as erection and bolting. Its scope is also very wide in that it covers all types of steel structures and structures subject to fatigue and seismic stress.

The requirements of part 2 are very similar to previous requirements and these are covered in detail in the BCSA NSSS (National Structural Steelwork Specification) V5 CE Marking Version. Copies are available from the website <u>http://www.steelconstruction.org/</u>

Undertaking projects to the NSSS should ensure that the steelwork complies with the provisions relevant to all types of building construction designed for static loading in EXC2 according to BS EN 1090-2.

With respect to CE Marking the relevant sections of BS EN 1090-2 are as follows:

- Documentation (clause 4 and Annex A);
- Constituent Steel Products (clauses 5, 12.1 and 12.2);
- Geometrical Tolerances (clauses 11 and 12.3 and Annex D);
- Welding and other fabrication operations (clauses 7, 6 and 12.4);
- Surface treatment for corrosion protection and durability (clauses 10 and 12.6 and Annex F).
- Welding / Welding Quality Management Systems / Welding Coordinator
- Execution Class
- Technical instructions
- Implementation
- Factory Production Control (FPC)

2.2 COMPLIANCE WITH THE CPR AND CE MARKING

In order for a steelwork contractor to demonstrate their right to CE Mark their products, they must be able to provide the following three documents:

- 1) Factory Production Control Certificate
- 2) Welding Certificate
- 3) Declaration of Performance

2.3 ROUTES TO GAINING CE APPROVAL

In order to be able to CE Mark the fabricated structural steelwork that they produce, steelwork contractors are required to declare performance to the System 2+ level of assessment. Only Notified Bodies are able to carry out certification assessment to award CE Marking (FPC and Welding Certificates).

Current approved notified bodies for any regulation are listed on the European Commissions website. With reference to BS EN 1090-1, the list of notified bodies can be viewed below http://ec.europa.eu/enterprise/newapproach/nando/index.cfm?fuseaction=cpd.nb_hs&hs_id=144404&cpr=Y

Basic requirements that need to be addressed ready for assessment by the Notified Body:

- 1. A Quality Control system that is preferably compliant with BS EN ISO 9001
- 2. Factory Production Control (FPC) Initial type testing and implementation of FPC system procedures
- 3. Employ/Subcontract and International Welding Engineer/Technologist (IWE/IWT) as a Responsible Welding Coordinator
- 4. A Welding Quality Management System (WQMS) is required that is in accordance with ISO 3834 and depending which part of this standard, 2, 3 or 4 you work to, determines which Execution Class you can work in.
- 5. Purchasing All products covered by the CPR must be purchased CE Marked and come with the appropriate test certification as of 1st July 2013. Non Conformance of this will mean failure of the audit

Certification will generally be ongoing unless there are any changes to procedures and annual surveillance of the FPC is passed



2. If your certified ISO 9001 is with a notified body then the FPC surveillance visit in lieu of one notified body ISO 9001 surveillance visit

Definitions

QMS – Quality Management System

IWE – International Welding Engineer

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2.4 HOW LONG WILL IT TAKE TO GET A CERTIFIED FPC SYSTEM?

For those companies without certified BS EN ISO 9001 and certified BS EN ISO 3834 systems in place the process can take between 18 months and 2 years.

With a compliant ISO 9001 quality system in place, one of the biggest requirements is to have a certified Welding Quality Management System (WQMS to ISO 3834) and employ/subcontract a Responsible Welding Coordinator (RWC). The level of execution class you require to work to will depend on how detailed and skilled your WQMS will need to be. Due to these variables the process can take from 3 to 12 months

3.0 COMPLIANCE

ParkerSteel are the first fully certified for ISO 9001 and CE Approved distributor and processor in the UK. Both our Canterbury and Shoreham depots are fully covered with a Factory Production Control system to Execution Class 4 – meaning we can process

We are fully compliant with all CPR requirements as a Distributor, Manufacturer and Importer and to the requirements of BS EN1090-1 and BS EN 1090-2 and have been approved by a independent assessment body effective from 1st July 2013 for all structural steel supplies, bolts and fasteners and pre fabrication processors of structural steel

We are fully compliant with the BCSA standard conditions of supply and the National Structural Steelwork Specification V5 CE Marking Version for goods supplied to Execution Class 2, 3 and 4.

PART 3 - PARKERSTEEL: COMPLIANCE WITH THE CONSTRUCTION PRODUCT REGULATION

3.1 HOW WE COMPLY

- Our Suppliers
 - Our suppliers are audited on an annual basis to ensure their certification such as ISO 9001 and FPC certificates among other criteria are current.
- Documentation
 - o We keep a full history of documentation for a minimum of 10 years. Current records go back over 25 years.
 - o Test Certificates of CE products can be downloaded from our website whenever required. When you place an order with ParkerSteel, you have full traceability at your fingertips
 - o Copies of all our current accreditation certificates are available to download
- <u>http://parkersteel.net/steel/media/pdf/literature/ce_marking_certificate.pdf</u>
- <u>http://www.parkersteel.co.uk/media/pdf/general/ISO_9001_Certification.pdf</u>
- Regular Auditing
 - o Our ISO 9001 quality management system (QMS) accreditation and Factory Production Control (FPC) means that we are regularly audited by both the BSI and SCCS
- Initial Type Testing
 - o The general principles behind evaluation of conformity are to use initial type testing and factory production controls measures. We have and will carry out regularly testing of all our processing to ensure they conform to the requirements.
- Factory Production Control (FPC)
 - Both our processing centres (Shoreham and Canterbury) are fully covered by FPC to ensure we can produce conforming products in regular ongoing production. The FPC is based on sampling being taken throughout the process meeting and recording the finding of the quality gates. For products of BS EN 10025-1 we use lot or cast tractability and normally these are 3.1 but in some products it could be only 2.1 certs (for Hollow Section S235, 3.1 type test certificates are not currently available). Many of these quality gates are audited by our BS EN ISO 9001 systems and ensure compliance and highlight any non conforming products.
- Dealing with Non Conforming Products
 - Non-conforming materials (whether due to defective material or defective documentation e.g. certificates) are controlled to prevent their sale or dispatch.
 When material is supplied to a customer, which does not conform to the specified requirements, but is accepted as non-conforming material, the description of the non conformity, that has been accepted, shall be recorded to denote the actual condition.
 - Product Recall
 - In the event of manufacturers product recall, the Company is able to identify who has been supplied the recalled product, using the product recall facility on the computer. Customers will be notified of recall in writing and advised of necessary action. Those materials recalled will be quarantined and the manufacturer informed.

3.2 BCSA MODEL PURCHASE SPECIFICATIONS

ParkerSteel are compliant with BCSA model purchasing specifications for the supply of steel products and adheres to the standards of the National Structural Steelwork Specification for Buildings 5th edition (CE Marking Version)

Copies of the BCSA Model specifications for the Supply of Steel Products can be found at the BCSA website http://www.steelconstruction.org/

3.3 HOW CAN PARKERSTEEL HELP?

At time of writing ParkerSteel are the only steel stockholder and processor to have full CE Approval to Execution Class 4. This means no matter what the scale of the job, ParkerSteel can supply steel stock and processed steel to the Execution Class required and fully compliant to NSSS V5 CE.

Our processing machines have all been tested for conformance to the relevant Execution Class (Section 3.4). This can help benefit your business as it means laborious tasks such as marking out, drilling, cutting and coping etc can be supplied to any execution class required, leaving skilled personnel free to focus on more value adding services.

Our website also gives you access to Test Certs instantly, which means you can quickly and easily attain the relevant test certs for a job as/when required.

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3.4 PROCESSING CONFORMITY

A stockholder may purchase and supply (non processed) material to EXC4 as long as the associated documentation is supplied to the relevant standard. However, as soon as the material is altered in anyway (this includes any of the processes below) the stockholder/processor immediately becomes the "manufacturer". To supply CE marked material a FPC is therefore required and the processor will only be able to supply processed material to the maximum execution class their certification allows.

Our FPC certificate is valid up to Execution Class 4 (the highest) which means we can process material to any level.

	EXC1	EXC2	EXC3	EXC4	Notes
Sawing	\checkmark	\checkmark	\checkmark	\checkmark	Tolerance +/-2mm length
Shot blasting	\checkmark	\checkmark	\checkmark	\checkmark	To s.a 2.5 finish grey or red paint
Drilling	\checkmark	\checkmark	\checkmark	\checkmark	Tolerance +/-2mm on location.
Etching	\checkmark	\checkmark		\checkmark	Unlimited number of numbers
Hard stamping	\checkmark	\checkmark		\checkmark	Up to 12 characters
Coping - Acetylene	\checkmark	\checkmark	**see note	**see note	** See 3.4.3
Coping - Plasma	\checkmark	\checkmark	**see note	**see note	** See 3.4.3
Shearing	\checkmark	\checkmark			Tolerance +/-2mm angles & flat bar
Shearing	\checkmark	\checkmark	×	×	Tolerance +/-2mm
Punching and Holing	\checkmark	\checkmark	**see note	**see note	Punching is not recommended for Execution Class 3 or 4 ** See 3.4.2
Forming	\checkmark	\checkmark	\checkmark	\checkmark	Above Grade S355 may need heat treatment
Laser	\checkmark	**see note	**see note	**see note	** See 3.4.3
Plasma	\checkmark	**see note	**see note	**see note	** See 3.4.3
Etching	\checkmark	\checkmark			Unlimited characters
Water jet	\checkmark	**see note	**see note	**see note	** See 3.4.3
Gemini	\checkmark	**see note	**see note	**see note	** See 3.4.3
Drilling	\checkmark	\checkmark	\checkmark	\checkmark	Tolerance +/- 2mm on position

3.4.1 Exclusion classes

- EXC1 Farm buildings.
- EXC2 Buildings (similar to the scope of the NSSS).
- EXC3 Bridges.
- EXC4 Special structures (power stations, long span bridges etc.).

3.4.2 Punching and holing*

Holes for fasteners or pins may be formed by any process (drilling, punching, laser, plasma or other thermal cutting) provided that this leaves a finished hole such that:

- A) Cutting requirements relating to local hardness and quality of cut surface to 6.4 (BS EN1090-2) are fulfilled.
- B) All material holes for fasteners or pins register with each other so that fasteners can be inserted freely through the assembled members in a direction at right angles to the faces in contact.

Punching is permitted provided that the nominal thickness of the component is not greater than the nominal diameter of the hole or for a non circular hole its minimum dimension.

For EXC1 and EXC2 holes may be formed by punching without reaming unless otherwise specified.

For EXC3 and EXC 4, punching without reaming is not permitted if the plate thickness is greater than 3mm then the hole will be punched at least 2mm undersize in diameter. For plate or sheet thickness less than or equal to 3mm the holes may be by full size punching.

When punching cut outs in plate over 16mm in thickness the deformed material shall be removed by grinding punched cut outs and not permitted for EXC4.

3.4.3 Cut outs and corners**

Over Cutting of re-entrant corners shall not be permitted. Re entrant corners are those where the open angle between the faces is less than 180 deg.

Re-entrant corners and notches shall be rounded off with a of 10mm that will cover up to Exc Class 2 or higher

Figure 2 — Example of cut outs r=10mm



Кеу

- 1. Not permitted
- 2. Form A (recommended for fully mechanised or automatic cutting)
- 3. Form B (permitted)

3.5 CERTIFICATION - ISO 9001 – QUALITY MANAGEMENT SYSTEM



Certificate No: RS 28966	
Location	Registered Activities
John Parker and Son Limited Vauxhall Industrial Road Canterbury CT1 1HD United Kingdom	Stockholding and supply of metals including fixings and fasteners.
John Parker Steel Cambridge Depot Pembroke Avenue Denny Industrial Estate Cambridge CB25 9QP United Kingdom	Steel fabrication, stockholding and supply of metals.
John Parker Steel Shoreham Port Fishergate Terminal, Basin Road South Southwick Brighton BN41 1WF United Kingdom	Steel fabrication, stockholding and supply of metals.
John Parker and Son Limited T/A Builders Beams Ltd 1 Rutherford Way Crawley RH10 9PB United Kingdom	Steel fabrication, stockholding and supply of metals.
Originally registered: 17/08/1994	Latest Issue: 22/02/2013 Expiry Date: 21/01/2016 Page: 2 of 2 roperty of BSI and is bound by the conditions of contract.
An electronic certificate can be authenticated <u>online.</u> Printed copies can be validated at www.bsigroup.com/Clie	ntDirectory
Information and Contact: BSI, Kitemark Court, Davy Aven BSI Assurance UK Limited, registered in England under nu A Member of the BSI Group of Companies.	ie, Knowlhill, Milton Keynes MK5 8PP. Tel: + 44 845 080 9000 mber 7805321 at 389 Chiswick High Road, London W4 4AL, UK.

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EC CERTIFICATE – FACTORY PRODUCTION CONTROL (FPC)



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WELDING CERTIFICATE

CCS	Steel Construction Certification Scheme Limited 4 Whitehall Court, Westminster, London SW1A 2ES		
X	Tel: +44 (0) 20 7839 3980 Fax: +44 (0) 20 7747 8199 Email: sccs@steelconstruction.org www.steelconstruction.org		
	Welding Certificate		
	2273 - CPR - 0025 - WC		
In complianc annex to the EC This Welding Certificate is	e with BS EN 1090-1:2009, table B.1, the following has been stated: This Welding Certificate is an Certificate of the Factory Production Control (FPC) 2273 – CPD - 0025. only valid in conjunction with the aforementioned EC-Certificate in the scope of the Construction Products Regulation or CPR.		
Manufacturer	John Parker and Son Limited.		
Facilities of the Manufacturer	Vauxhall Road, Canterbury, Kent, CT1 1HD Fishgate Terminal, Basin Road South, Portslade, Brighton, 8N41 1WF		
Standard	BS EN 1090-2: 2008 + A1:2011		
Execution Class	up to EXC 4 according BS EN 1090-2:2008 + A1:2011		
Welding Process (es)	None		
Base Material(s)	Universal beams and columns, rolled steel joists and channels – up to BS EN 10025 S355JR Rectangular, square and circular hollow sections – up to BS EN 10219 S355J0H Sheet and plate – up to BS EN 10025 S355J2		
Responsible Welding Coordi	nator None		
Alternate	None		
Attestation	This certificate attests that all procedures for the execution and surveillance of weiding works are implemented.		
Date of first issue	June 2012		
Date of this issue	1 ^{er} June 2013		
Date of next Surveillance	by 31 st May 2014		
Validity Period	This certificate remains valid as long as the conditions laid down in the technical specification in reference (in connection with BS EN 1090-1:2009+A1:2011) or the manufacturing conditions in the factory or the FPC itself are not modified significantly.		
Chairman:	Scheme Manager:		

4.0 FREQUENTLY ASKED QUESTIONS

4.1 What is CE marking as required by the Construction Product Regulation?

CE marking is the record of the performance of the product as stated in the Declaration of Performance. From 1st July 2013 construction products in conformity with a Harmonised Standard (hEN) or a European Technical Assessment (ETA) must have CE marking.

4.2 Does material have to be physically marked 'CE'?

No, CE Marking can be either affixed to the product, issued with accompanying documentation or made available on demand through electronic means.

4.3 What is the aim of CE marking?

The aim of CE marking in the steel industry is to harmonise the safety performance of construction products across the EU.

4.4 Who needs to comply?

- Importers of structural steelwork.
- Stockholders and Metal processors.
- Fabricators of Metal components that have a structural use in civil engineering

4.5 I use a Sub Contract Fabricator, how are they covered?

The sub contractor is covered under the main fabricators CE accreditation but it his responsibility to ensure that all procedures for CE marking are carried out and that any sub contractor used is included in there Factory Production Control (FPC) system.

4.6 Main Contactors Responsibility?

The main contractor or client should appoint a steelwork contractor with an Execution Class (1.5 page 5) equal to or higher than that required for the project. As determined in BS EN 1090-1.

4.7 When does it come into force?

- 1st July 2013 for construction products
- 1st July 2014 for fabricated structural steelwork to BS EN 1090-1

4.8 What is defined as a construction product?

Any product or kit (two or more products which are put together) placed on the market for incorporation in a permanent manner in construction works, the performance of which affects the performance of the construction works with respect to the seven Basic Requirements (see page 6)

4.9 What are the main products are covered?

The main products affected in steel construction are indicated on page 3 (1.1) but include hot rolled steel sections, plate, hollow sections, fixings, fasteners and welding consumables. Basically, if it's due to used permanently as part of the structure it will need to be CE marked according to the CPR.

4.10 Can I still upgrade material?

Yes. A sample of the material will be sent to an independent test house, as long as the tests pass, the material can be upgraded to a higher specification. The test report will be supplied along with the original material inspection report.

4.11 What's the difference between CE and non-CE Steel products

For Steel Construction Products, not too much has changed, as for a number of years prior to the new regulations, material in the industry has been supplied to the harmonised standard (i.e BS EN 10025-1). New CE requirements will mainly effect the paperwork (marking and labelling)

ParkerStee

4.12 What's the difference between CE and non-CE Fixing & Fasteners Products

The CPR states that only bolts M12 and above in diameter require CE Marking. The majority of non preloaded bolts supplied into the industry prior to 1st July 2013 was to a worldwide DIN standard. These are now illegal to use as a structural bolt as defined in the CPR.

- For non preload bolts BS EN 15048 must be used these will generally come ready assembled and the load bearing nut and bolt are subject to much stringent tests to ensure quality and performance. 3.1 certs generally issued, although 2.2 is acceptable. The easiest visual check is CE approved structural bolts will have 8.8SB stamped on the bolt head and nut.
- Pre-loaded bolts have generally been supplied to BS EN 14399 for a number of years, so this will not have as significant impact as long CE marking information (including test certs) is supplied

4.13 Who is responsible for providing the CE marking information?

The manufacturer of the construction product who makes it available on the market. Note: From July 2014, if you alter a CE marked product in any way (i.e drill, cut, weld it etc) you become the manufacturer so must have a FPC system in place to allow you to "CE Mark" the product or kit.

4.14 How does a distributor who makes the product available on the market provide the CE marking information?

If the product has been transferred from the manufacturer to a distributor and the distributor has not changed the integrity or declared performance of the product in any way, the distributor must ensure that the product is issued with the manufacturer's CE marking (inspection documents "test certs"). The Distributor must ensure full traceability of the product (ISO 9001)

4.15 Does a Test Cert mean a product is CE Approved?

On its own, No. The material must be purchased from a supplier with a quality management system (ISO 9001) which means the material is fully traceable back to source. If this is fulfilled and the product was placed on the market prior to 1st July 2013 this will still meet the requirements of the CPR - as long as the test cert is to the required standard (page 7).

4.16 How long do Declarations of Performance and the CE marking information have to be retained/ filed by the manufacturer and distributor?

Technical documentation, Declarations of Performance and the CE marking information must be retained for a period of 10 years.

4.17 Does it apply if I don't fabricate steel?

Yes, any product covered by a harmonised standard or ETA which has an end use in construction must be CE marked.

ParkerSteel

4.18 If I fabricate structural steelwork what do I need to do to comply?

From July 2013 any products you use in fabricating a component/kit for use in structural steel work must be CE marked where a harmonised standard exists

From the 1st July 2014 fabricated steelwork require a CE mark. This means fabricators will not be able to fabricate any construction products without a FPC Cert for BS EN 1090-1, as by changing the integrity of the product they effectively become the manufacturer for the component or kit. This is covered in detail in 2.3 (pages 12 & 13). The basic requirements are:

- To have purchasing systems in place to ensure you buy only CE marked sections, bolts and welding consumables
- Install a Factory Production Control system
- Where welding is involved, a Welding Quality Management System (WQMS) is needed and to include the appointment of a Responsible Welding Coordinator
 - o Your WQMS will need to cover you for the maximum Execution Class required
- Once the above is in place the Company is ready to become certified by a notified body, this can take up to 12 months to achieve.

4.19 What happens if I don't comply?

The legislation is now law throughout the UK. As a steelwork contractor you will be responsible to conform to the regulations as set out in NSSS V5CE. This requires the construction product regulations and CE marking to be adhered to and if not are in breach of your contractual agreements and completion certificate.

As well as this if your purchasing systems are not in place, for simply not purchasing CE compliant bolts for example, you could also fail your FPC audit which would mean you fail any surveillance visits putting future contracts at risk.

4.20 How will it be enforced?

Legislation will be brought in 2013 to enable enforcement by the Trading Standards Authority, which will have the power to stop a business from trading until the company shows that it complies with the regulations. In severe cases the Directors may be imprisoned.

4.21 Does it just apply to "New Builds"?

No, the construction product regulation will apply to any work be carried out to UK building regulations.

4.22 If I purchase from Parkers will I be covered?

In a word, Yes. Any product you request for execution class 2+ will be CE Marked and the appropriate inspection report will be issued along with CE marked paperwork.

4.23 Are Parkers Covered to supply CE Marked Fabricated Products

Yes, we were among the first processors in the country to gain our Factory Production Control (FPC) Certification (page 19) which means we can fabricate the material and supply the goods with full CE Approval.

4.24 Is CE Marking anything to do with BREEAM?

No, BREEAM is an independently assessed method of building and sets the standard for the best practice in sustainable design. A BREEAM compliant building will be required to comply with UK building regulations and as such CE Marked material will still be required.

4.25 Will I need a test certificate for every item purchased?

No, a fabricator can ask the stockholders to hold the certificates and make them available when required. The Construction Products Regulations require Steelwork Contractors to retain the technical documentation (including CE marked Test Certificates) for a period of 10 years.

4.26 What is CEV?

This is the Carbon Equivalent Value and which is an indication of the materials weld ability. The steel specification states that the CEV must be .45 or below to conform.

Parker



www.parkersteel.co.uk www.parkertools.co.uk www.johnparker.co.uk

CE Marking & Construction Product Regulations 2013 Issue v1.0 30/8/2013

The information within is correct to the best of our knowledge and should be used as a guide. For definitive information always consult original source material