

CE-marking of furnace fixtures

There are still ongoing questions if load handling equipment forwarded by cranes is subject to an obligatory CE-marking as defined by 2006/42/EC directive on machinery. Also, the question has been raised if furnace fixtures and charging baskets (Fig.1) are equivalent to load handling equipment as defined by this directive or just „handling devices“. The simple answer is: yes, it’s subject to CE marking and the directive on machinery applies. The following should give an overview about the applicable laws on EC marking as well as mandatory considerations by the manufacturer and operating company. Please note that the German Equipment and Product Safety Act is a national directive linked to the 2006/42/EC directive on machinery. This article refers to EC and the correspondent German law only; please check your national directives accordingly.

Equipment and Product Safety Act). The CE-label is the appropriate and visual confirmation tag.

Due to the loads and stresses during operation, the fixtures are subject to ageing

which requires a regular monitoring and evaluation. This is regulated by Industrial safety regulations and Occupational Safety Act (Germany; please check your national laws and directives accordingly).



Furnace fixture



Charging basket

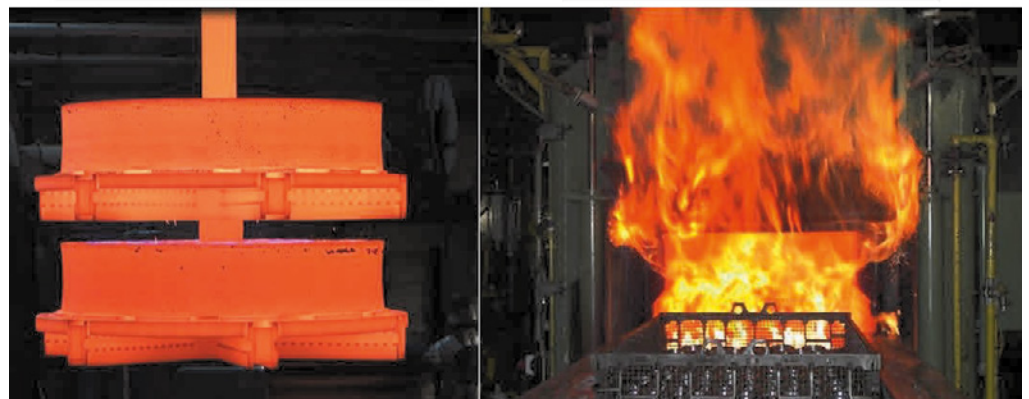


Fig.1: Furnace fixtures are facing a complex stress scenario

OPERATING CONDITIONS OF FURNACE FIXTURES

Load handling equipment – e. g. furnace fixtures and charging baskets – used in heat treatment processes are facing a complex load and stress scenario. They are not only thermally stressed but also by mechanical loads as well as a chemical interaction through various quenching media (Fig. 2).

Only safe products must be launched to the market by manufacturers and distributors; this is mandatory by 2006/42/EC directive on machinery and national product safety directives (such as the German

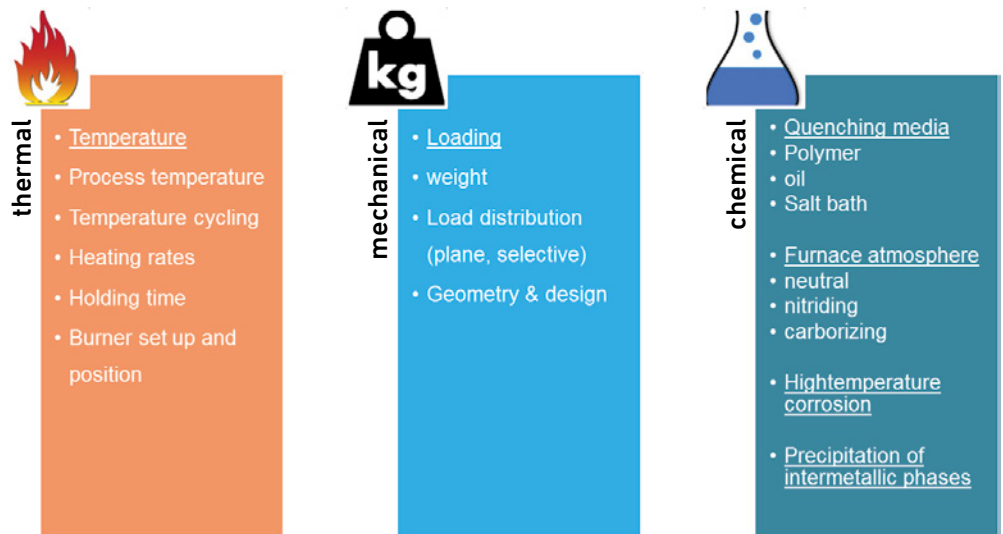


Fig.2: Furnace fixtures and charging baskets are subject to directive 2006/42/EC legislation and need CE-marking

DEFINITION OF „LIFTING ACCESSORY“

The DIRECTIVE 2006/42/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 17 May 2006 on machinery, and amending Directive 95/16/EC (recast) clearly defines charging baskets and furnace fixtures as lifting accessory. A definition is given in Article 1, scope 1 (d). The term “Lifting accessory” is defined by Article 2 (d):

(d) ... ‘lifting accessory’ means a component or equipment not attached to the lifting machinery, allowing the load to be held, which is placed between the machinery and the load or on the load itself, or which is intended to constitute an integral part of the load and which is independently placed on the market; slings and their components are also regarded as lifting accessories;...[...]

Any manufacturer or distributor must therefore proof conformity of the product with directive 2006/42/EC. Note that any product – regardless it’s place of manufacturing – must fulfill these requirements when being placed on the EC market. It is the manufacturers (or distributors resp. traders) responsibility to ensure this requirement is met.

HOW TO CE-LABEL YOUR PRODUCT

„Placing a product on the market“ as termed by the directive on machinery is subject to harmonized standards and conditions. This means that product placing follows the same rules within the EC. These rules are build-up as a stage-gate-system. **Fig. 3** provides an overview about the CE-marking procedure.

The EC provides an online service to check if a specific product requires CE-marking or not. Lifting accessories are regulated by directive 2006/42/EC as previously mentioned.

The individual member states will convert the EC directive into national law – this has to be considered when conducting a CE assessment. Germany (as an example) has to follow its specific national Equipment and Product Safety Act.

The next step forward is to define the relevant CE assessment procedure – this is regulated by the annexes of the directive (**Fig. 4**). It also defines which products have to be checked by a type-examination, the full quality assurance procedure or the procedure for assessment of conformity.

A technical documentation is required (e. g. engineering and design, applicable

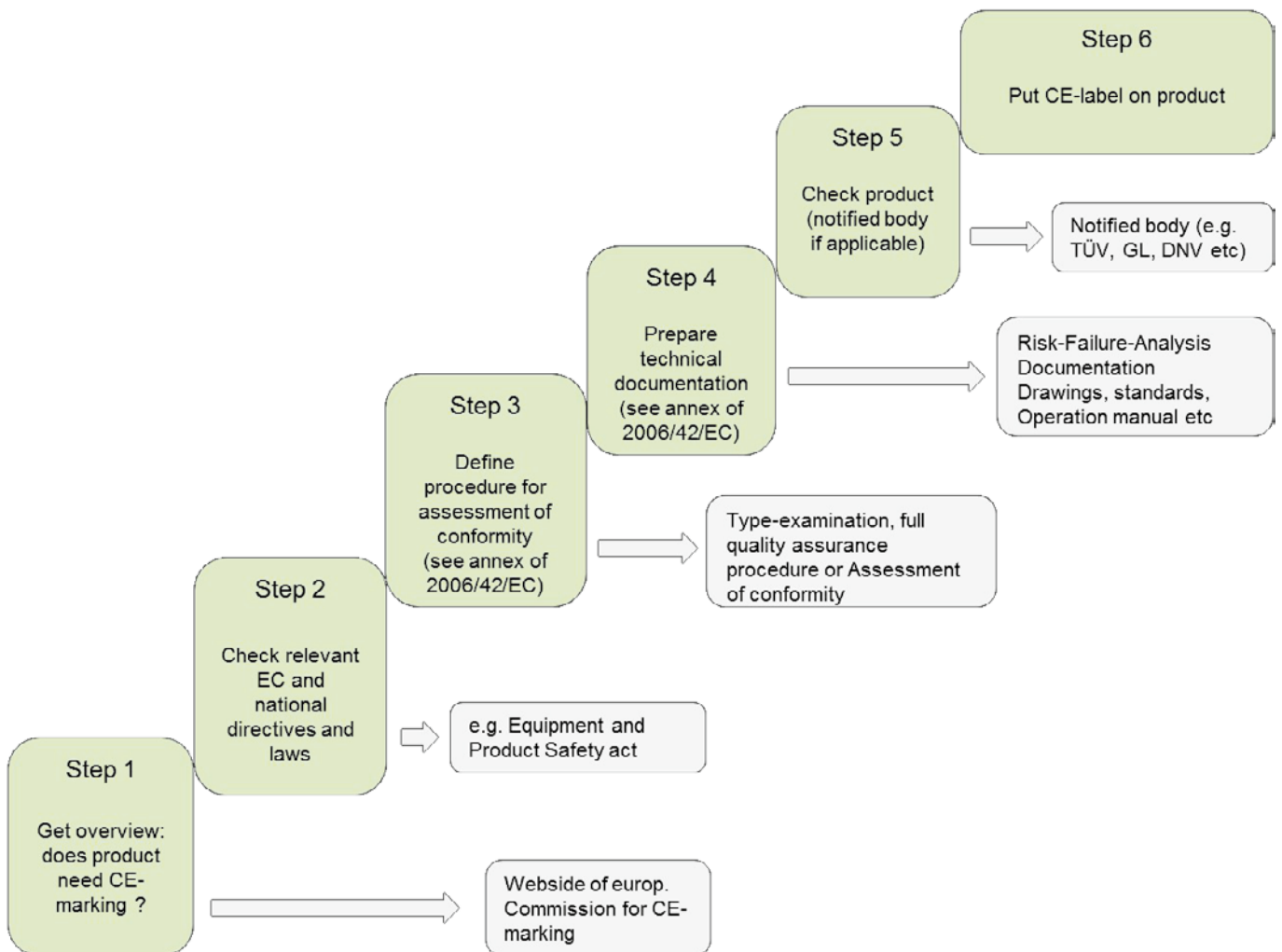


Fig.3: Overview about the CE-marking procedure

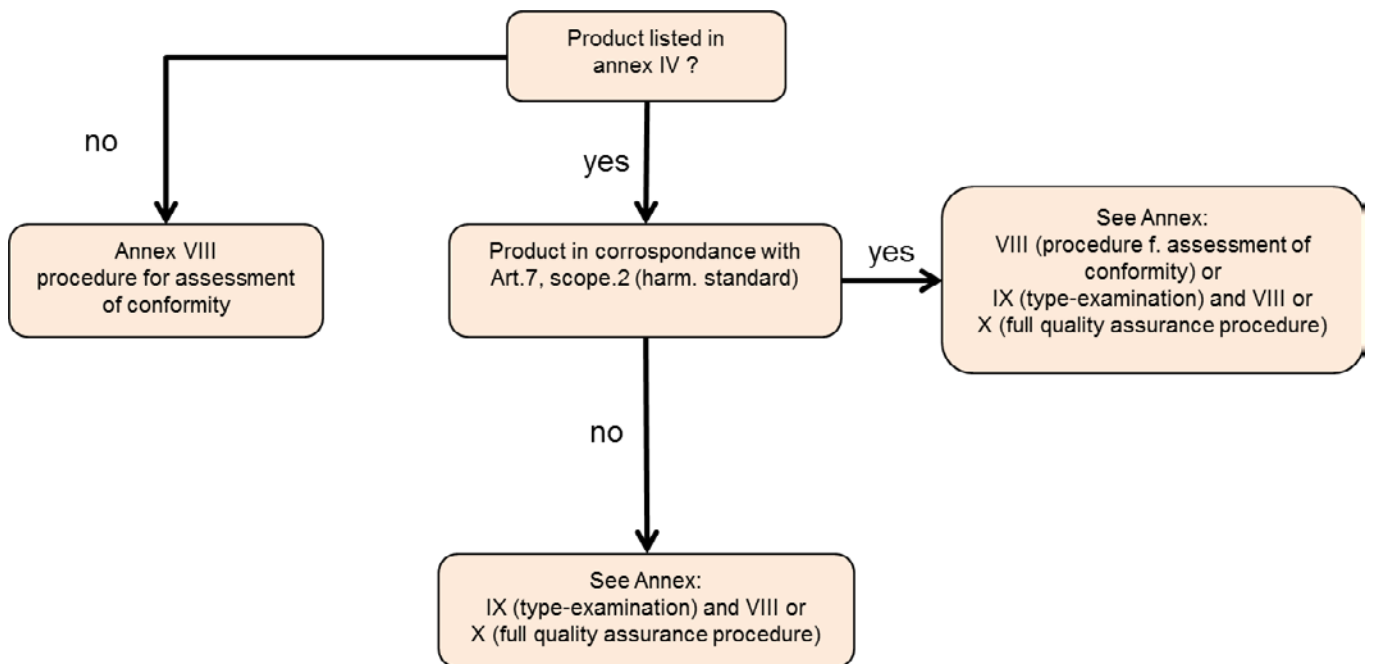


Fig.4: The procedure for assessment of conformity is regulated by the annexes of the directive of machinery

documents as laws, standards etc. Risk-failure-analysis etc.) including an operation manual with a description of the intended application.

Under given circumstances, a type-examination with a notified body can be required. In this case, the details of the type-examination shall be agreed between the manufacturer and the notified body.

Finally, the CE-label is being placed on the product – note that national directives might have specific requirements.

The manufacturer confirms that the product is in accordance to any legal requirement as far as directive 2006/42/EC concerns – in other words: the product is safe with regards to the rules of the directive on machinery.

It is self-explanatory that the entire procedure demands a careful and sensitive research and look-up of all relevant directives and standards, which can indeed be a significant piece of work. Especially the

risk-failure-analysis is of great importance – any identified risk must be eliminated which could potentially lead to a complete redesign or re-engineering.

EXAMPLE OF CE-MARKING

As already mentioned, the manufacturer must provide evidence of conformity with all relevant standards and directives by documentation. The written CE-declaration specifies these standards and directives for traceability.

The customer should not only receive an operation manual but also a control sheet and testbook for safety operation. The testbook is to assist the operator to comply with any health & safety obligation required. Just like a service checklist, the testbook allows to document the current condition of the lifting accessory quickly and easily. If required, the check-up can be subcontracted to the supplier, e. g. Friedr. Lohmann GmbH, including repair and maintenance.

IF CE-MARKING IS ALREADY PRESENT

The CE-label is valid as long as directives, laws and the product characteristics have not changed. As soon as relevant modifications – on the product – have been issued (new materials, different engineering etc), the entire CE-marking procedure must be relaunched. Same as with any changes in the applicable laws. Therefore, a regular check on updates is mandatory.

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