



Position paper of
FEM Product Group Cranes and Lifting Equipment
Sub-Group Mobile Cranes

Indication of stability limits in capacity charts of mobile cranes

Legal Note: This paper should serve only as a reference and overview: it is meant to provide guidance in the assessment of risks related to the interpretation of load charts. It neither addresses each and every imaginable scenario, nor is it a binding interpretation of the existing legal framework. It does not and cannot replace the study of the relevant directives, laws and regulations. In addition, the specific features of different products and their various applications have to be taken into account. This is why the assessments and procedures referred to in this paper may be impacted by a large variety of circumstances. Accordingly, a number of other interpretations are also possible.

Based on manufacturer's calculation methods and applicable standards, the capacity chart of a mobile crane is the result of different limitations, e.g.: structural limits of the crane chassis, outriggers, slewing platform, booms, max. pressure in hydraulic cylinders, rope pulls, slewing ring etc., including stability criteria and test loads to be applied. On optimized mobile cranes these limits are usually close together.

As required in European Machinery directive 2006/42/EC, capacity charts provide the information necessary to prevent overloading of the crane, regardless of the corresponding governing criteria. If the maximum load given in the capacity chart is exceeded in areas where stability is the limiting factor, the next limitation usually will be close by.

Based on above FEM is of the opinion that marking of the stability limit in the capacity chart does not provide additional information regarding the safe operation of the crane and it may lead to incorrect interpretations regarding the capacity chart and limiting factors of the crane. Therefore FEM is of the opinion that there is no need for indication of the stability limit in the capacity charts.

The capacity chart of a mobile crane shall never be exceeded, independent from the relevant limit.

This statement is supported by the Association of Equipment Manufacturer (AEM –www.aem.org), subgroup crane manufacturers and the Power Crane and Shovel Association (PCSA), Crane Technical Committee.

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Created in 1953, the European Materials Handling Federation (www.fem-eur.com) represents, defends and promotes European manufacturers of materials handling, lifting and storage equipment including cranes and lifting equipment and particular mobile crane.

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