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**Saves time and money and creates value for customers and developers: ProWeld software from thyssenkrupp Steel Europe calculates welding parameters**

Steel comes in many different varieties. thyssenkupp Steel Europe alone has over 1,800 variants in its range. For customers, developers and processors, the key question is: How will a particular steel behave during processing, for example during welding. thyssenkrupp Steel Europe now offers a completely revised version of its free software program Pro Weld that calculates welding parameters for modern steels.

**Welds are key to structures**

One advantage of advanced high-strength steels is that they allow a reduction in plate thickness, for example in mobile crane manufacturing, and therefore a reduction in crane deadweight. Crane payload increases, while manufacturing and operating costs decrease. However, advantages like these can only be achieved if the weld matches the strength of the base metal.

**ProWeld: a quick aid to choose the adequate welding parameters**

To prevent cold cracking, the weld zone must meet a certain temperature – dependent among other things on plate thickness and steel grade. thyssenkrupp Steel Europe developed the software ProWeld to calculate parameters such as these. It gives customers and developers a quick and reliable means to calculate all the main parameters for the welding process, including suitable filler metal, welding method and weld geometry. The software also supplies values for thermal efficiency and weld factors. Using this information, ProWeld calculates recommendations for preheat and interpass temperature and heat input during welding. The results, including tolerances, are presented graphically in the form of an allowable work envelope for welding. In a further graphic, ProWeld presents the influence of cooling time t8/5 on maximum hardness in the heat-affected zone, showing for example the minimum cooling time needed to limit hardening of the material.

ProWeld lets you calculate the following:

* Carbon equivalents
* Minimum preheat temperature
* Cooling time t8/5
* Heat input
* Maximum hardness in the HAZ (heat-affected zone)

To use ProWeld all you need to do is register on the thyssenkrupp Steel Europe website. Users, who are already registered on “steel online” can use ProWeld immediately.

<https://online.thyssenkrupp-Steel.com/ecmlogin/proweld_register.do>

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