



taperView

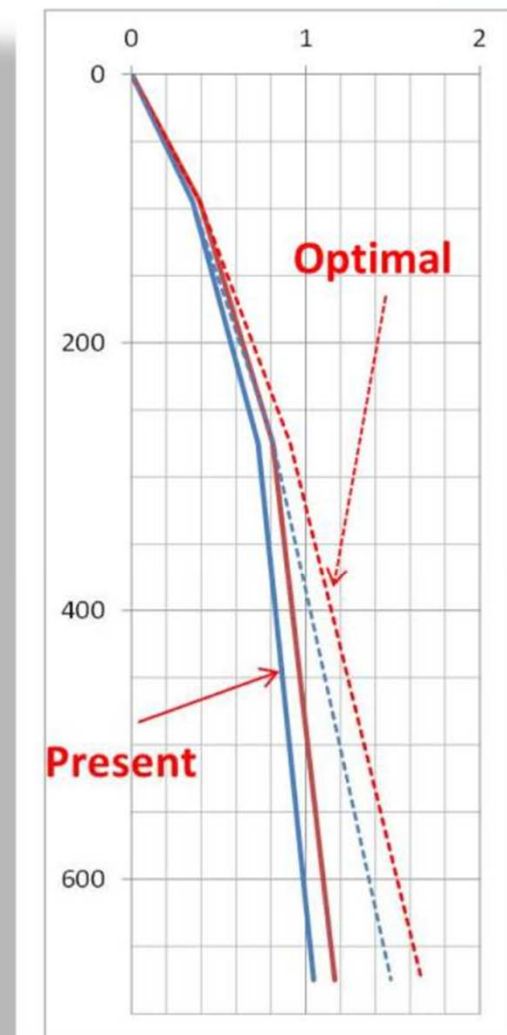
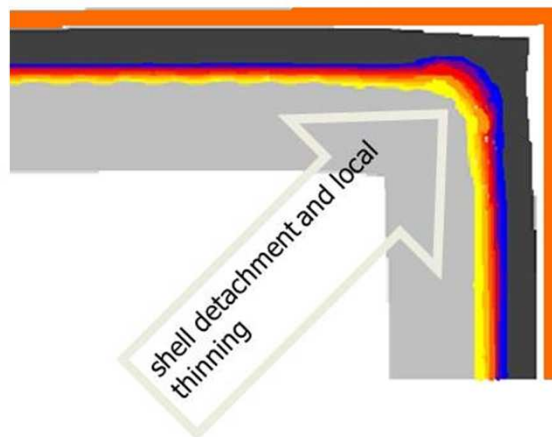
Problem:

Any steel grade behaves differently during solidification depending on its physical and mechanical properties. When the taper of the mould is not properly designed to cope with the shrinkage of the grade under solidification in the mould, defects can appear in the cast product.

Solution:

taperView is a service CSM offer to its Customer in order to define the most suitable mould geometry design for avoiding any stress to the solidifying shell.

taperView is based on a thermo-mechanical Finite Element Model applied to steel solidification. A complete database allow to input the correct thermo-mechanical characteristics for any steel grade.



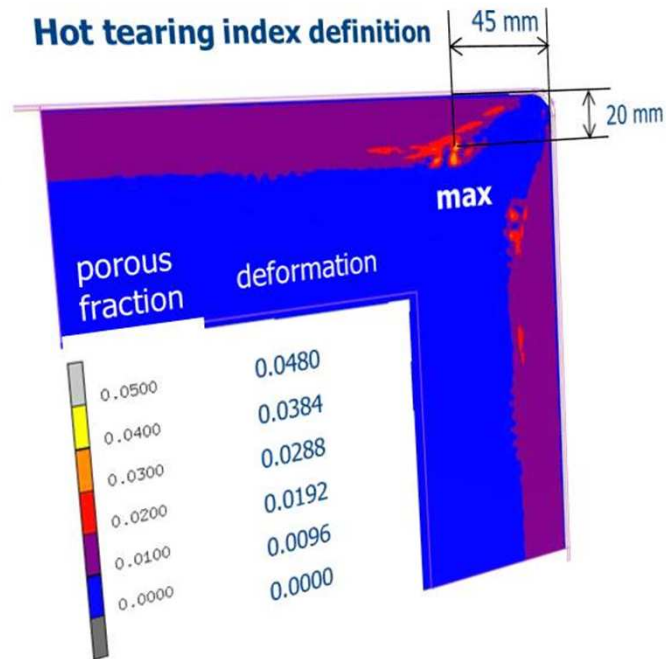
Benefits:

- To design the correct mould taper corresponding to the real shrinkage
- To minimise stress map, in particular at edges, in order to reduce cracking occurrence
- To improve cast quality
 - To contrast hot tearing proneness of specific steel grades

Data request:

Present mould taper data, steel grade compositions to be cast, casting powder datasheets.

Ductility data in the range of solidification for any steel grade under investigation (CSM labs available).



taperView, when applied systematically, can allow to define the optimal set of mould with different taper to be used with different steel grades.

In this way, when real shrinkages and relevant taper are coupled, stress cracks are minimised.

