

## Special laser fused T-Sections



<b>Profile:</b>	<i>Special T-Sections</i>
<b>Material grade:</b>	<i>SS321</i>
<b>Execution:</b>	<i>laser fused</i>
<b>Industry served:</b>	<i>Energy &amp; Power</i>
<b>Destination:</b>	<i>Poland</i>

Two special T-Sections in stainless steel were produced on customer design for the construction of frames for furnace doors of coke ovens.

The bars had to be supplied according to the customer's request in different lengths from 4m up to 6m.

The chosen material was the high temperature suitable stainless steel grade 1.4541 (321) with a high degree of

protection properties against intergranular corrosion.

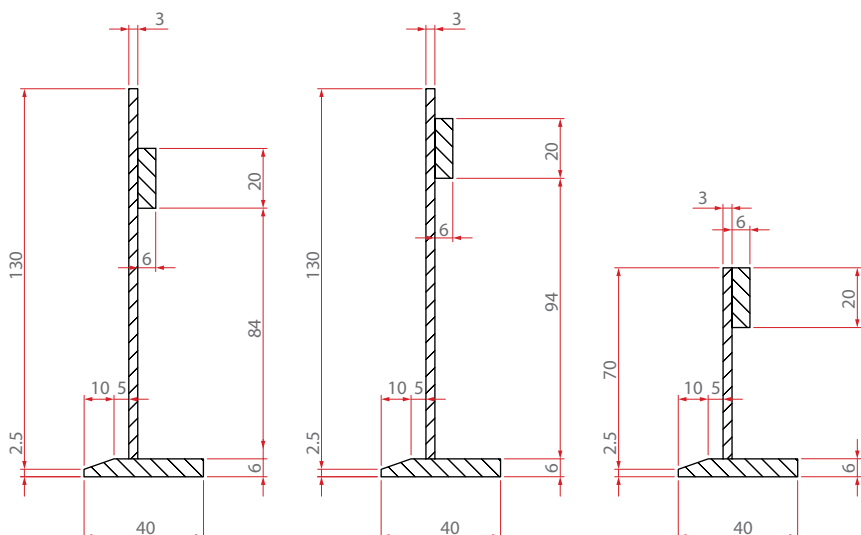
Particularly challenging was the size-thickness ratio of the web. The particularly tall webs (64mm and 124mm) in consideration of the extremely thin material thickness of 3mm (!!)

result in a real challenging product even with the distortion-poor laser fusion technology.

A flat (20x6mm) was laser fused onto the web positioned with a very stringent tolerance. This product is ideal for the laser fusion technology as the heat input for fusing this special section is very little compared to the heat input of conventional welding, and the result is a very straight bar, both as far as straightness and as far as angularity is concerned, thus only little straightening activity is necessary after welding.

The flange had been previously machined to a tapered shape on one side.

Supplied without pickling, as the customer was going to pickle the structure after assembling on site.



*special T-section for furnace door*