



Welding Instructions - Cast Corner adaptor

Welding Instructions

Following is a quick reference on consumables that can be used to weld FEURST products. For a complete reference on welding procedures, refer to the document entitled «General welding recommendations».

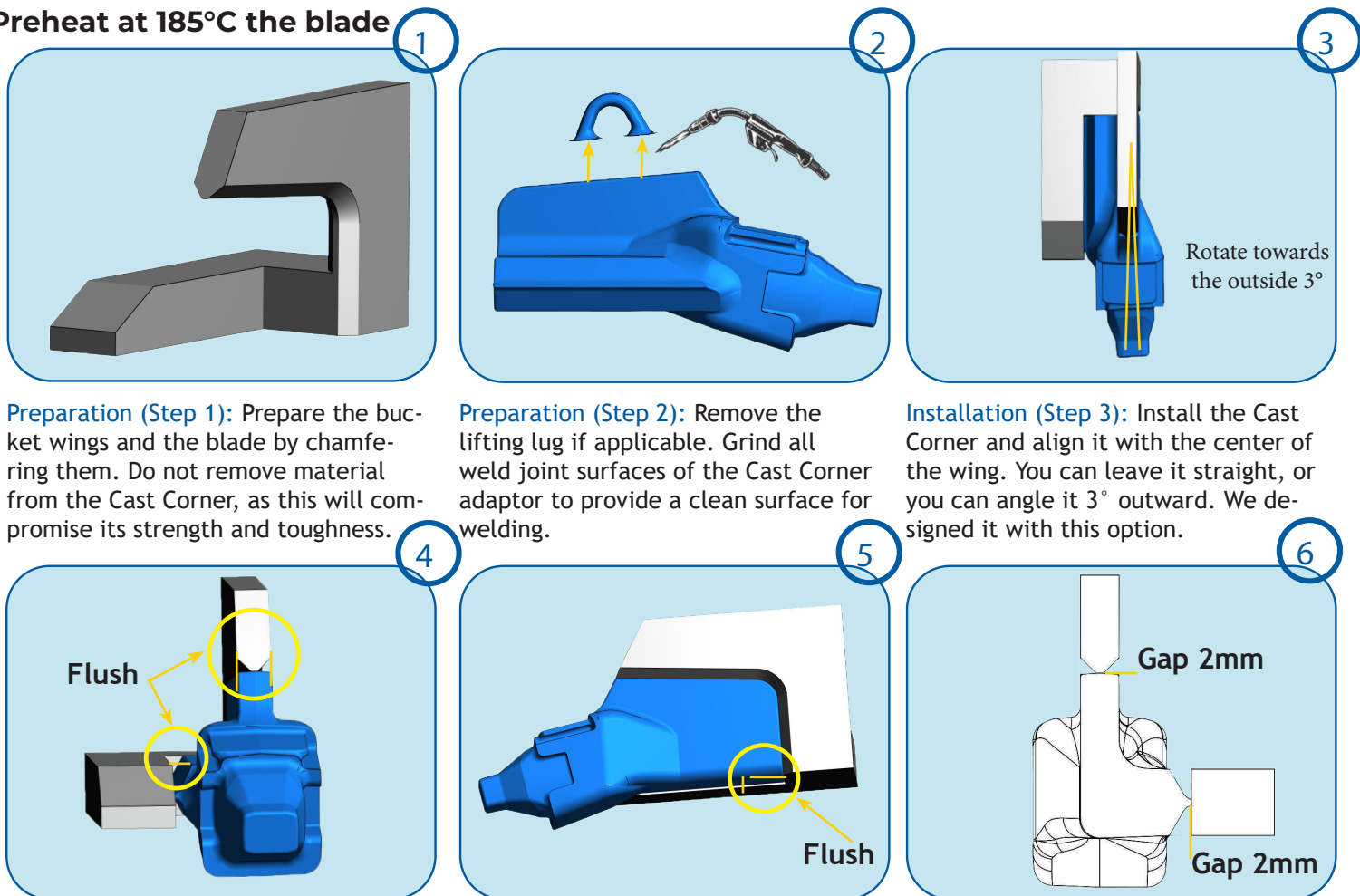
Welding unalloyed filler consumables

PROCESS	EN CLASS	AWS CLASS
SMAW	EN ISO 2560-S E42X	E70X ACCORDING TO A5.1 OR EQUIVALENT UNDER A5.5
GWAM	EN ISO 14341-A G42X EN ISO 14341-A G46X	E70C-X ACCORDING TO A5.18 OR EQUIVALENT UNDER A5.28 E70S-X ACCORDING TO A5.18 OR EQUIVALENT UNDER A5.28
FAW	EN ISO 16834-A T42X	E7XT-X ACCORDING TO A5.20 OR EQUIVALENT UNDER A5.29

Welding austenitic stainless filler consumables

PROCESS	AWS CLASS
SMAW	E307-X ACCORDING TO A5.4
GWAM	E307T-X ACCORDING TO A5.22 ER307 ACCORDING TO A5.9
FAW	E307-X ACCORDING TO A5.22

Preheat at 185°C the blade



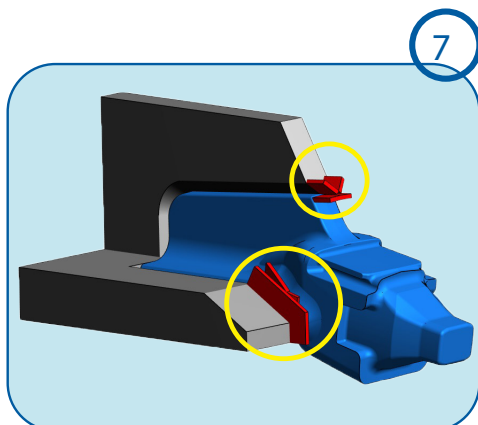
Preparation (Step 1): Prepare the bucket wings and the blade by chamfering them. Do not remove material from the Cast Corner, as this will compromise its strength and toughness.

Preparation (Step 2): Remove the lifting lug if applicable. Grind all weld joint surfaces of the Cast Corner adaptor to provide a clean surface for welding.

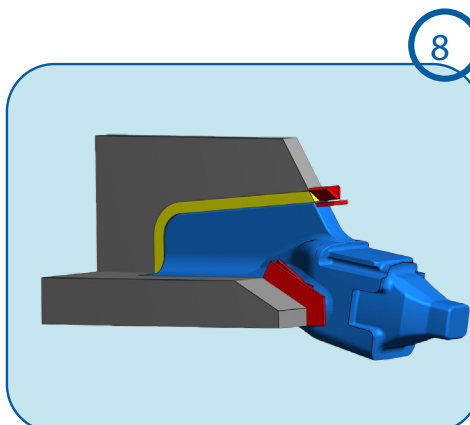
Installation (Step 3): Install the Cast Corner and align it with the center of the wing. You can leave it straight, or you can angle it 3° outward. We designed it with this option.

Installation (Step 4): Place the Cast Corner adaptor at the desired location. In most cases, the top and bottom of the adaptor will be flush to the top and bottom surfaces of the blade. If, for any reason, this is not the case, the adaptor and the blade must be always flush at the bottom of the lip. Check the gap between the wing's weld preps to ensure that they are less than 2mm - 3/32 in. which is the maximum dimension for the gap. If the gap is too small, remove material from the weld's preps of the blade by oxy fuel cutting, arc air gouging, or machining. If the gap is too large, not to exceed 25mm - 1in. corrections may be made by adding, on the blade, spacers of low carbon mid steel.

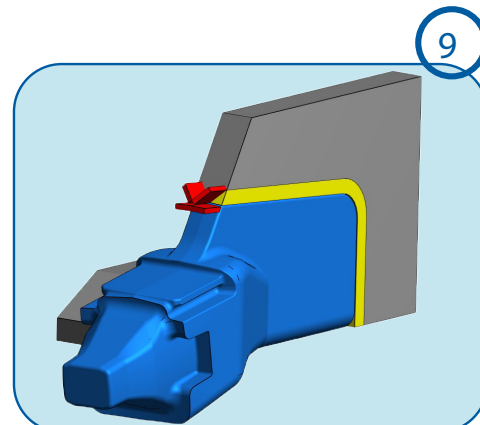
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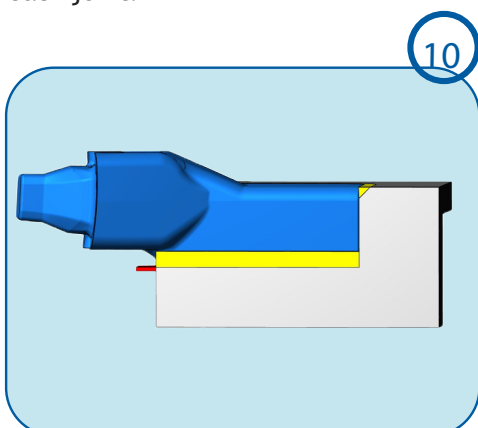
Welding (Step 1): Tack weld the corners in place, using two 25mm-1in. long beads at the roots of the groove weld.
Tack weld the starter and run-offs tabs or groove extensions at the ends of each joint.



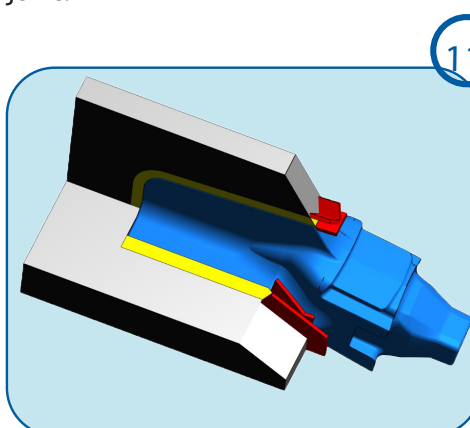
Welding (Step 2): Beginning at the end of the groove extension, apply a continuous root bead on one side of the joint, finishing at the end of the other groove extension. Apply a second layer on the same side of the joint.



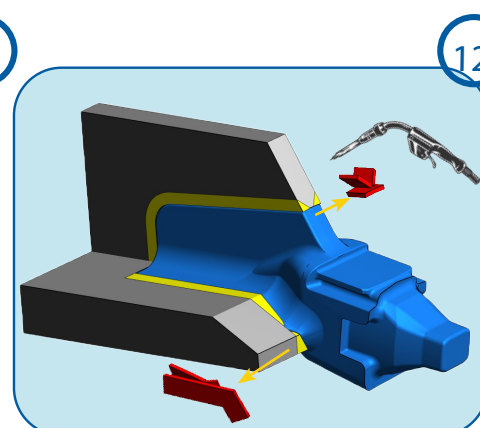
Welding (Step 3): Flip the assembly over and back gauge the root of the joint to sound base metal. Apply a root pass and a second layer.



Welding (Step 4): Do exactly the same thing with the bottom of the adapter. Continue building up the groove by layer, flipping the lip over after each layer.
Ensure that the welding technique comply with the document «General welding recommendations».



Welding (Step 5): The last weld bead must not be adjacent to the cast corner.



Welding (Step 6): If weld groove extensions have been used, remove them and the excess of weld material by using arc/air gouging, followed by grinding. Form a smooth transition between the lip and the casting

Welding over: After welding completion, a visual inspection of welds must be performed. A penetrant or magnetic particles inspection to be conducted after 48h or 72h of the welding completion. Any crack in the welds must be cleaned and repaired.