

Steel and Dissimilar Steel Joining Alloys:

The most common and important instance of dissimilar metal joining is that of welding stainless steel to carbon – manganese steel or to low alloy steel. The most common application is attachments or transitions.

The welding is almost always carried out with over – alloyed stainless consumables i.e. having higher alloy content than the base metal. Two different methods are employed for this type of welding. The entire weld groove can be filled up with the over – alloyed stainless steel or any nickel based consumable. Otherwise, the lower alloyed surface can be buttered with an over – alloyed stainless weld metal and then the groove can be filled up with a consumable matching with the stainless side. The welding can usually be performed without preheating. However, if there is any recommendation for that particular grade of steel, then that has to be followed.

