

# COMPARISON OF METAL SPRAYING WITH WELDING

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Welding is a method of joining materials or components to each other, either by direct fusion or through the use of an intermediate filler material. It is also used to apply surface coatings for reclamation or to confer improved wear resistance on OEM articles.

Weld overlay materials are typically steels, bronzes or nickel based alloys. The coatings are metallurgically bonded to their substrates and porosity levels are very low.

### Metal Spraying Offers the Following Advantages

- Low pre-heat or no pre-heating is required
- No heat treatment is necessary after coating
- Little heat is transferred to the work piece during coating
- There is therefore no risk of thermal distortion
- There is little risk of metallurgical degradation of the substrate
- Almost any substrate can be coated
- There is no dilution of the coating by the substrate material
- A wider range of coatings can be applied
- Operator skill requirements are lower
- Spraying is usually (but not always) faster
- There is better control over deposit thickness
- Machining allowances are reduced, thus saving material
- Machining times will also be reduced.