Railrod Electrodes - for Rail Welding

**Railrod** is a basic coated low hydrogen MMA (SMAW) electrode. As its name suggests Railrod is primarily designed for the welding of rail using a square edge joint preparation and a slag-over-slag welding technique. The special electrode design allows good side wall fusion without interference from the slag cover. This process has not generally been accepted for in-situ welding of passenger track and is primarily used on rails for rolling stock and cranes in dockyards, mines, steelworks, etc. Cranes operate best when the rails on to which they run are welded into continuous lengths. However rails are difficult to weld as they:

- Have high carbon content to give them wear resistance
- Have a high carbon equivalent and must be welded using special techniques
- Are considered to have a large and awkward section for welding

**Railrod** is used for welding rail steels with up to 0.8% carbon and nominal tensile strengths in excess of 700MPa. The figure below shows the ranges of tensile strength exhibited by some standard grades of rail steel, in addition to some actual results. As can be seen **Railrod** provides a good match, or even overmatch in some cases, to these grades of steel. This has advantages in that the weld metal will provide good resistance to collapse under compression by rolling loads; lower strength weld metals would show a tendency to ‘mushroom’ (or collapse) under compression. It also provides comparable hardness to rail steel grades containing up to 0.8% carbon with a typical hardness of 360 Vickers/Brinell.

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**Railrod** electrodes have been sold in large volumes over many years to key fabricators in the UK and abroad.

**Railrod** is available ex-stock from Metrode in the following sizes:

- 3.2mm
- 5.0mm
- 6.0mm

Metrode Products Limited
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Key Railrod in the search field