

## AI-1642

### Description and Applications

**AI-1642** is an alloy specially produced for sub-arc applications where build up and hardfacing of carbon steels is required. This alloy offers resistance to the combined effects of abrasion and impact. **AI-1642** has a microstructure of bainite + martensite. It has excellent machineability and can be oxy cut.

**Applications:** **AI-1642** is used as a build up and cladding alloy on crawler tractor rollers and idlers, shafts, cylinders, mine car wheels and crane wheels.

### Welding Flux

Use of a basic flux is recommended: **AI-16 Record 605**

### Typical Weldmetal Analysis

C	Mn	Si	Cr	Mo	V
0.11	1.9	0.9	1.4	0.78	0.24

### Mechanical Properties of Weldmetal

Hardness (two layers)

	As welded	500°C	525°C	550°C	575°C	600°C
AI-1642SA	53HRC	46HRC	40HRC	37HRC	31HRC	28HRC

### Welding Parameters

Diameter (mm)	Current type	Amps	Stick-out	Welding Speed (cm/min)	Flux Consumption (kg/kg wire)
2.4	DC +ve	280-350	30-35	35-45	1.1
2.8	DC +ve	300-420	30-35	35-45	1.1
3.2	DC +ve	325-450	30-35	35-45	1.1
4.0	DC +ve	400-450	30-35	40-45	1.1

### Disclaimer

All figures in this datasheet should be considered indicative only. No guarantee is made as to their accuracy.

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