

Dur RU (Ni)

CATEGORY SMAW Stick Electrodes

TYPE NiCrBSi based SMAW electrode filled with tungsten carbides for extreme wear resistant overlays.

APPLICATIONS The main applications are hardfacing and rebuilding of stabilisers and other oilfield tools where maximum protection is required. Also for augers, impellers, mixer plates in the brick and clay industry and on decanter screws in the food and chemical industry where corrosion resistance is needed. DUR RU (Ni) can be applied on all sorts of steels except on cast iron or Mn-steel. This alloy is the most wear resistant type in most hardfacing applications. In case of very fine dust abrasion It might happen that the matrix will be washed out and loses the imbedded Tungsten carbides, in this case another hardfacing product should be considered..

PROPERTIES **Dur RU(Ni)** is a coated flux-cored tube for electric welding, a newly designed hard-surfacing product consisting of crushed tungsten carbide and a Ni-based alloy. Crushed cast carbide will guaranty a long life. Furthermore the Ni-based alloy provides an excellent corrosion resistance.
Dur RU (Ni) has excellent welding and wetting characteristics at very low currents. It is easy to use and inexperienced welders will have no difficulties to produce smooth deposits mainly without cracks. Multi-layer deposits are possible and worn parts can be rebuild without removing the old material. **Dur RU (Ni)** can be applied on all sorts of steels except on cast iron or Mn-steel.

CLASSIFICATION

| | |
|--------|------------------------|
| AWS | A 5.13: no class |
| EN ISO | 14700: E Ni20 |
| DIN | 8555: E21-GF-UM-60-CGZ |

SUITABLE FOR Scratchers, mixers, deep drilling, bentonit mixers, cement mixers, stabilisers, impellers, augers etc.

APPROVALS CE approved

WELDING POSITIONS:



| | |
|---------------------------|---------------------------------|
| Ni + Cr + B + Si (Matrix) | Crushed tungsten carbides (WC2) |
| Rem | 65% |

MECHANICAL PROPERTIES

| Heat Treatment | R _{p0,2} (N/mm ²) | R _m (N/mm ²) | A ₅ (%) | Impact Energy (J) ISO-V | | Hardness | |
|----------------|---|--|-----------------------|-------------------------|-------|----------|----------|
| | | | | -20°C | -40°C | Matrix | Carbides |
| | | | | | | 500 HV | 2360 HV |

WELDING PARAMETERS / PACKING

| Welding Parameters | | | Packing | | |
|--------------------|-------------|----------------------|----------|------------|-----------|
| D (mm) | Length (mm) | Current (A) (DC+/AC) | kg / can | kg / 6pack | kg / 1000 |
| 4.0 | 350 | 100 | 5 | 30 | |
| 5.0 | 350 | 120 | 5 | 30 | |
| 6.0 | 350 | 160 | 5 | 30 | |
| 8.0 | 350 | 160 | 5 | 30 | |

REDRYING TEMPERATURE not required

PARTICLE SIZE Tungsten particle sizes are standard 0,2-0,5 mm (other sizes are available on request)