


**P20** and **H13** DC-
**TOOL STEEL****DESCRIPTION**

High quality TIG rod for the **repair** and the **build up** of the dies made in tools steels type P20 and type H steel (H11, H12, H13, etc)

**CHARACTERISTICS**

- **Deposit metal similar to P20 or H13 steel, depending on the case**
- Dense and porosity free deposit
- Deposit can be heat treated
- Deposit has good machinability (only P20)
- Good resistance against abrasion and heat (H13 deposits)

**TYPICAL APPLICATIONS**

**Soudotec P20** is recommended for the repair and the build up of dies and support for the die casting of zinc, plastic, etc.

**Soudotec H13** is recommended for the repair and the build up of dies for the die casting of aluminum, zinc, magnesium. Repair of hot working and forging dies.

**PROCEDURE**

Remove any trace of oil, grease and dirt from the surface. Remove damaged metal with the **Soudotec 212 SP** or **Soudotec G12** electrode. Prepare the part with rounded grooves and remove all cracks. Preheat the thick section between 250 à 400°C (482 à 900°F). Deposit straight bead of 2" to 3" long. Use a short arc and at high welding speed to avoid overheating the parts. Cool down slowly. In certain situations it is suggested to post-heat to reduce the stress and to have a good colour match deposit.

**MECHANICAL PROPERTIES**

Hardness P20 (as-welded): 34 - 36 HRC  
 Hardness H13 (as-welded): 55 - 57 HRC

**WELDING PARAMETERS**

|                |                             |                |                |
|----------------|-----------------------------|----------------|----------------|
| Diameter:      | 3.2 mm (1/8")               | 2.5 mm (3/32") | 1.6 mm (1/16") |
| Polarity:      | DC-                         |                |                |
| Gas:           | Pure Argon                  |                |                |
| Gas flow-rate: | Approximately 35 - 40 c.f.h |                |                |

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*Specialized welding alloys and technology. For technical assistance or for ordering:*



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