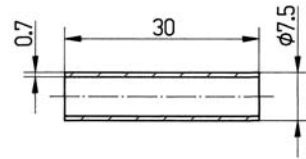
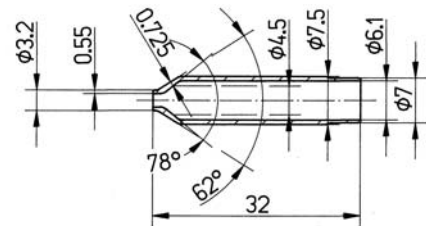


Components produced by Precision Rotary Swaging:
Glow Tubes for Glow Plugs for Car Diesel Engines

Blank



Finished part



95-0090/M

Workpiece:

Material: INCONEL 601
 NICROFER 6025 HT

Blank: tube dia. 6.25 x 0.65 mm
 and dia. 7.55 x 0.7 mm
 length approx. 25 to 60 mm

Manufacturing requirement:

Complete manufacture of work-piece in one machine pass

Previous technique:

none / new design

Operation sequence:

1. Rotary swaging taper end and stub
2. Mandrel breakage check
3. Facing and chamfering (45°), first workpiece end
4. Reducing second workpiece end
5. Facing and chamfering (10°), second workpiece end
6. Chamfering inside of second workpiece end

Advantages:

- Good dimensional accuracy
- Excellent surface finish
- Minimum chip production
- Favourable grain structure
- Complete manufacture of part in only one machine pass

Machine description:

Automatic transfer line consisting of:

- 2 swaging stations
- 1 mandrel breakage checking station
- 3 turning stations

Production rate:

Cycle time: approx. 7 sec.
 (= 8.6 pieces/min.)

Machine:

Model: HA 16-6 V

Required floor space without sound enclosure: (L x W x H)
 approx. 4350 x 2800 x 2834 mm

Weight: approx. 5,000 kg

Required power: approx. 12.7 kW