

**SPECIFICATION OF SWAGING EQUIPMENT TO SWAGE  
SS WIRE ROPE WITH SS TERMINAL**

SI No	DETAILS	SPECIFICATION																
1.	Requirement	Realization of flexible bolt for hold down release. (Swaging of Cold worked SS304 (Hardness 17- 21 HRC) terminals to cold worked SS 304 wire.)																
2.	Principle of operation for the equipment	Pneumatically operated.																
3.	Input air pressure	< 7 bar																
4.	Shipping Volume of the equipment	500 mm (L) X 500mm(W) X 1000mm(H)																
5.	Mass of the equipment	<50 kg																
6.	Wire diameters	<p>All dimensions are in mm</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Diameter of wire-rope</th> <th style="text-align: center;">Length of component to be swaged (L)</th> <th style="text-align: center;">Diameter of component before swaging (D)</th> <th style="text-align: center;">Diameter of component after swaging (D)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">Ø2.4</td> <td style="text-align: center;">20</td> <td style="text-align: center;">Ø 5.5</td> <td style="text-align: center;">Ø 4.8</td> </tr> <tr> <td style="text-align: center;">Ø4</td> <td style="text-align: center;">30</td> <td style="text-align: center;">Ø 7.2</td> <td style="text-align: center;">Ø 6.3</td> </tr> <tr> <td style="text-align: center;">Ø5</td> <td style="text-align: center;">28</td> <td style="text-align: center;">Ø 9</td> <td style="text-align: center;">Ø 7.9</td> </tr> </tbody> </table> <p>Typical swaging dimension of one of the terminals and wire rope details are shown in Annexure-1 for reference.</p>	Diameter of wire-rope	Length of component to be swaged (L)	Diameter of component before swaging (D)	Diameter of component after swaging (D)	Ø2.4	20	Ø 5.5	Ø 4.8	Ø4	30	Ø 7.2	Ø 6.3	Ø5	28	Ø 9	Ø 7.9
Diameter of wire-rope	Length of component to be swaged (L)	Diameter of component before swaging (D)	Diameter of component after swaging (D)															
Ø2.4	20	Ø 5.5	Ø 4.8															
Ø4	30	Ø 7.2	Ø 6.3															
Ø5	28	Ø 9	Ø 7.9															
7.	Strength of swaged joint	The strength of the respective wire size will be tested in URSC premises																
8.	Number of swaging equipment to be supplied	<b>1Nos</b>																
9.	Swaging die sets	<b>2 sets of dies (sleeve type ) for the swaging equipment as per the wire diameters mentioned in SI no.6 (Total :6 sets of dies)</b>																

**NOTE:**

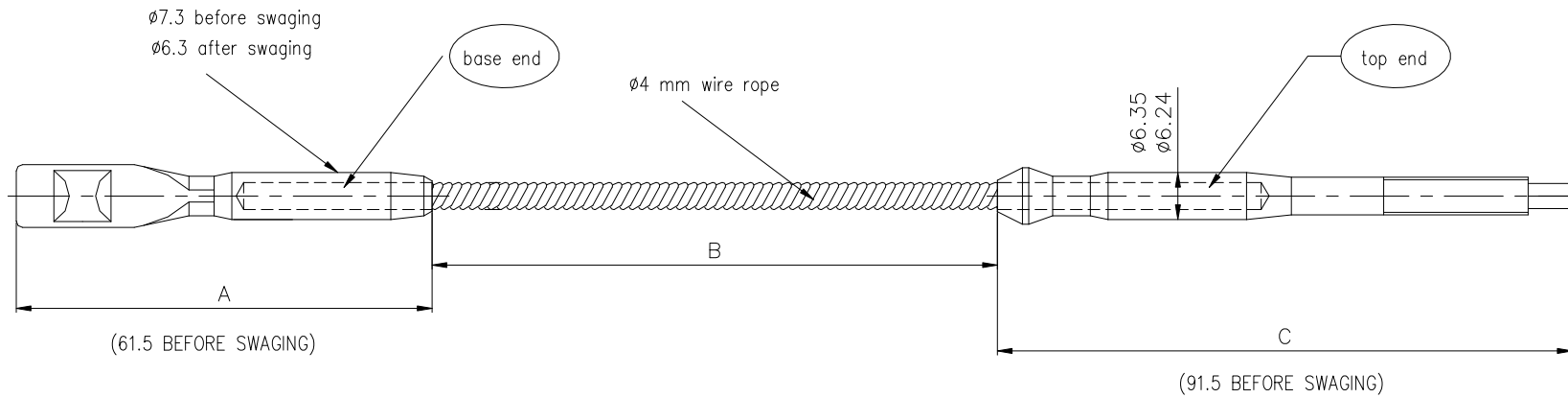
1. Process of swaging using sleeve type dies and easy in operation with minimum / No previous experience for operator.
2. Die movement control through foot operation pneumatic valve.
3. Simple in replacing and alignment of dies for various wire diameters.
4. Swaging die made in two segments.
5. Equipment should be portable (table top type) and to be able to relocate from one place to another manually without crane, transportation trolley etc.
6. Necessary tools for replacing dies, tools for maintenance and gauge for checking swaged terminal should be supplied along with equipment.
7. Vendor to provide detailed catalogue along with the quotation
8. The warranty of the instrument should be provided for atleast one year.
9. **Vendor has to provide demo/training of the product in URSC. Three hold down bolts to be swaged during the demo/training.**
10. **Payment to be made only after successful testing of the hold down bolt at URSC.**

The following tests will be carried out on the swaged bolt.

- A) Die-penetrant test
- B) X-Ray Test of the swaged bolt
- C) Strength Test

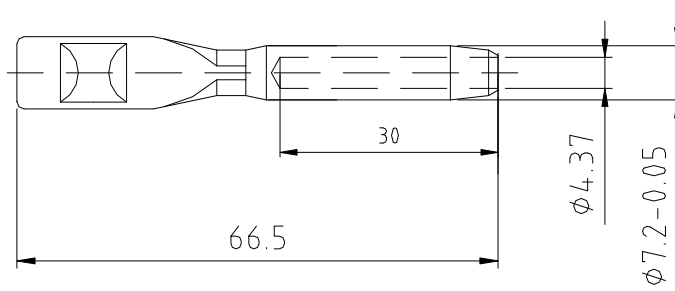
**"Product will be accepted by URSC, based on meeting the above mentioned test results"**

**SWAGED ASSEMBLY**

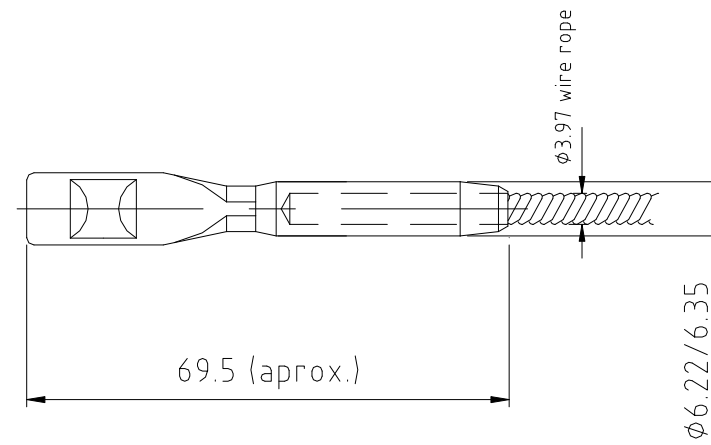


**Details of Base end before & after swaging**

Material : SS 304 cold worked, 17 – 21 HRC hardness, Swaging process to achieve the final diameter with a surface finish of 3.2microns



BASE END TERMINAL BEFORE SWAGING



BASE END TERMINAL AFTER SWAGING