

## DIE – BUILD - E

A basic electrode which is designed to give a low carbon alloy steel weld deposit similar to H12 in its alloy content. It is extremely suitable for building up large composite dies or extensive repairs of similar insert dies used in hot-forging. The weld metal has an excellent hot cracking resistance and resistance to thermal shock. It exhibits superior wear resistance at high temperatures as compared to DIE- BUILD –N. The deposit is machinable and has a hardness of 41-45 RC. Its hardness can be controlled as desired by employing a suitable post weld heat treatment / tempering.

### Applications:

Die Build – E is extremely suitable for building up large composite dies or extensive repair of similar insert dies used in hot – forging. Suitable for lining of tools, dies and rotary drills piercing and mandrills.

### Procedure:

Ensure that the electrodes are totally dry. Remove all fatigue material / work hardened – loose material by gouging or grinding. Heat the base metal 300<sup>0</sup>C – 550<sup>0</sup>C depending upon the size and thickness of the die. Use stringer beads and short arc procedure. Weaving should be limited to three times the dia of the electrode. Peening of weld deposit is recommended. Its hardness can be controlled as desired by employing a suitable heat treatment/tempering.

### Technical Data : DIE BUILD – E

Tempering Temp.	500 <sup>0</sup> C	550 <sup>0</sup> C	600 <sup>0</sup> C	650 <sup>0</sup> C
Hardness	45 RC	42 RC	40 RC	38 RC
One Hour soaking per 20mm thickness.				

Size (mm), Ø	:	3.15	4.00	5.00
Recommended Welding Current (Amps)	:	80 - 110	100 – 140	130 – 170
Tensile Strength	:	120 kgf/mm <sup>2</sup>		
Hardness ( As Welded )	:	41 – 45 HRC		
Tip Colour	:	Red		

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