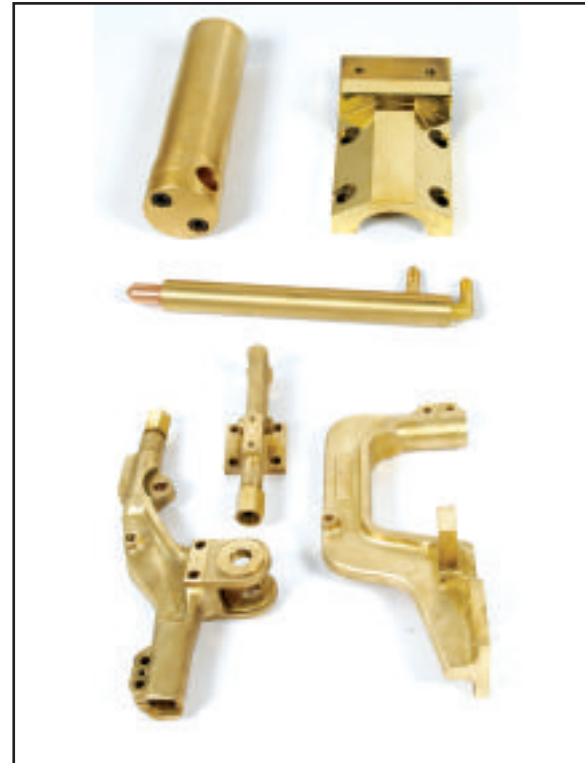


## KICKLESS CABLES, JUMPER CABLES & SHUNTS



- Alternate polarity.
- Low reactance.
- Forged electrolytic copper terminals.
- Balanced positive and negative water cooling distribution.
- Low electrical resistance.
- Low impedance.
- Reduced operator fatigue.
- Reduced heat generation.
- Longer working life.



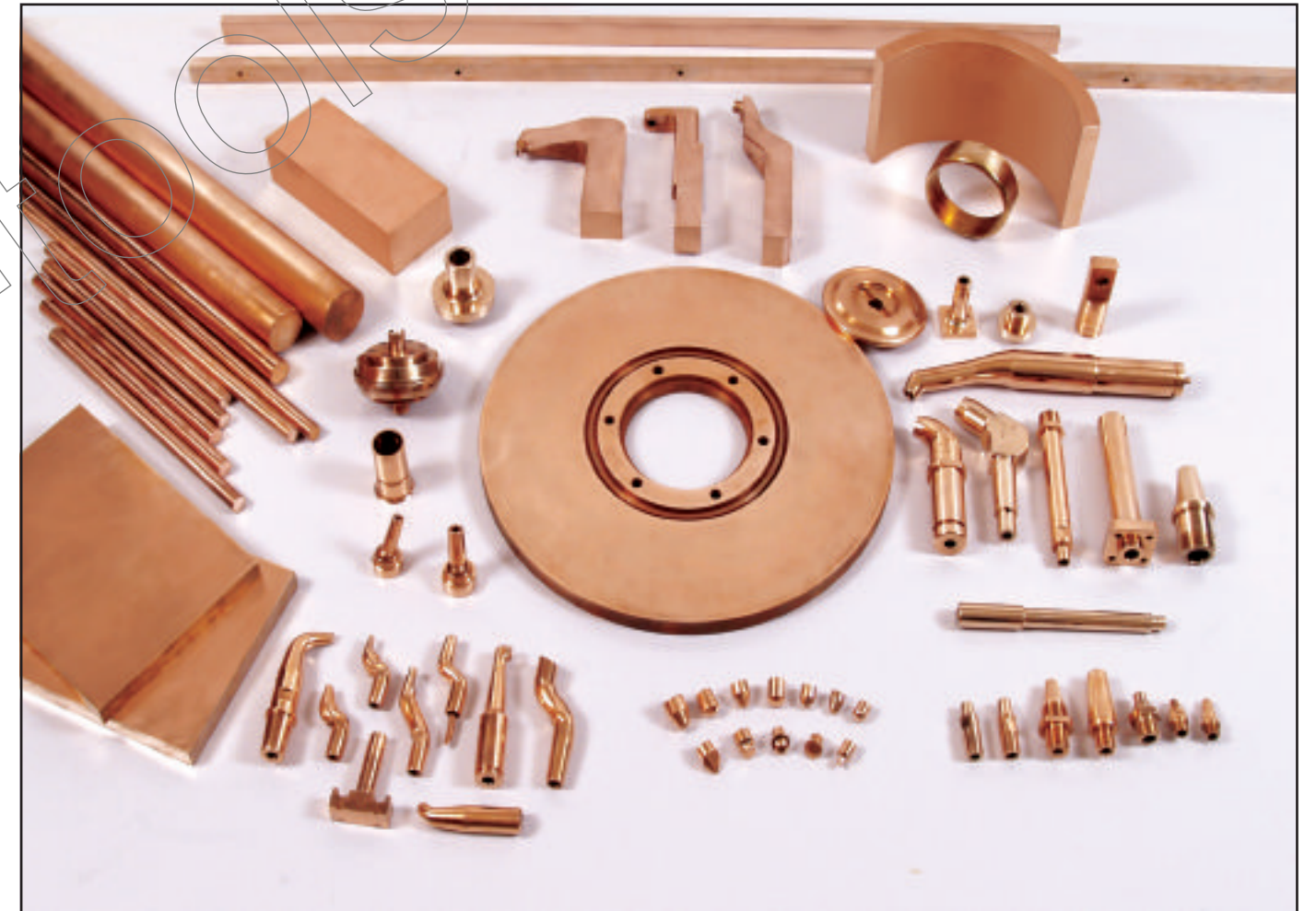
BSBM Machined Items and Gun Arm Castings

# SEAM



## RESISTANCE WELDING PRODUCTS

- CAP TIPS • STRAIGHT ELECTRODES • SINGLE BEND ELECTRODES
- DOUBLE BEND ELECTRODES • SHANKS • HOLDERS • SPECIAL HOLDERS • SEAM WELDING WHEELS
- FLATS & RODS • SHUNTS • KICKLESS CABLES • GUN ARMS • ACCESSORIES



### TYPICAL PHYSICAL AND MECHANICAL PROPERTIES OF SEAM ALLOYS

RWMA Class	ALLOY	Composition %	TYPICAL PROPERTIES					TYPICAL USAGE
			Hardness [Rockwell]	Electrical Conductivity % IACS	Ultimate tensile strength kg / mm <sup>2</sup>	Elongation %	Annealing temp. °C	
1	SEAMLLOY - 1 Drawn Bars	Zr - 0.15 Cu - Rest	70 - 78 B	90	40 - 45	12 - 18	525	Spot and Seam welding aluminium magnesium (alloys) coated metals and hot rolled steel
	Forgings		68 - 75 B	90	40 - 45	12 - 18	525	
2	SEAMLLOY - 3 Drawn Bars	Cr - 0.6 - 1.2 Cu - Rest	70 - 80 B	80 - 85	45 - 55	10 - 15	500	Spot and Seam welding of cold and hot rolled steel, current-carrying shafts and arms, backup bars for arc welding
	Forgings Castings		70 - 80 B 68 - 75 B	80 - 85 80 - 85	40 - 50 34 - 44	15 - 25 15 - 20	500 500	
2	SEAMLLOY - 4 Drawn Bars	Cr - 0.6 - 1.0 Zr - 0.02 - 0.15 Cu - Rest	76 - 85 B	75 - 85	45 - 55	10 - 15	550	Similar to SEAMLLOY - 3. Electrodes where good cooling is not available
	Forgings Castings		72 - 80 B 70 - 80 B	75 - 85 75 - 85	40 - 50 34 - 44	15 - 25 15 - 20	550 550	
3	SEAMLLOY - 100 Bars & Forgings Castings	Be. : Free Proprietary	92 - 102 B	40 - 45	55 - 65	10 - 15	525	Similar to SEAMLLOY - 100 Be
			90 - 100 B	40 - 45	55 - 65	10 - 15	525	
3	SEAMLLOY 100 BE Bars, Forgings & Castings	Be - 0.2 - 0.6 Ni - 1.4 - 2.2 Cu - Rest	92 - 102 B	45 - 60	75 - 85	10 - 25	550	Spot and Seam welding Stainless Steel and high temp. heat resisting alloys requiring high weld forces, projection welding electrodes and dies
4	SEAMLLOY - 73 Bars, Forgings & Castings	Be - 1.8 - 2.2 Ni/Co - 0.3% Cu - Rest	32 - 35 C	20 - 23	110 - 130	3 - 10	375	Flash welding dies, springs, components for electrical and electronic industry requiring spring action and good conductivity
	COPPER Bars, Forgings & Castings		40 B	100	20 - 24	35 - 50	200	Bus bars, Kickless cable lugs, electrical contacts transformers, secondaries
	ALUMINIUM BRONZE	Please ask for separate catalogue.						

SEAM reserves the right to change specifications and appearance without prior notice.

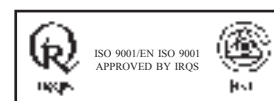
V3 2K 0507

## SEAM ENGINEERS PVT. LTD.

(A NASH Group Company)

95/8, MIDC, Satpur, Nashik 422 007, India  
 Phones : +91 - 253 - 2353382, 2352180, 2350680  
 Fax : +91 - 253 - 2351780  
 Email : co@nashrobotics.com  
 Web : www.nashrobotics.com

ISO 9001



Continuously serving Resistance Welding Industry since more than 2 decades, SEAM is an industry leader in development, engineering and manufacture of variety of products.

In addition to electrodes, holders, seam welding wheels, forgings, castings, guns, electrode materials, SEAM offers diversity of special metals for resistance welding applications like Tungsten Copper and Molybdenum tipped electrodes.

SEAM resistance welding products are so engineered to provide most effective materials commercially available to achieve best quality welds.

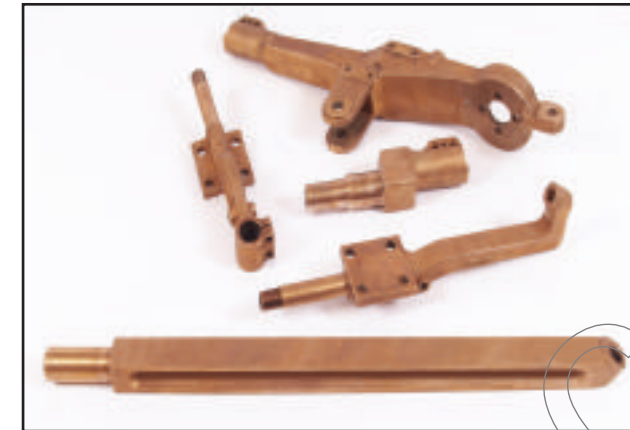
Experienced SEAM team will provide best possible help in the design and production of standards or special electrodes for your application to ensure maximum efficiency.



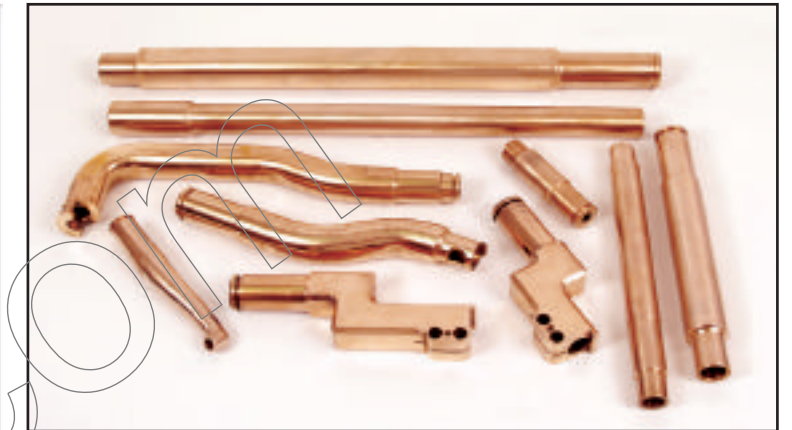
Cap tips



Projection Welding Platen



Cast Gun Arms  
Class 3 Alloy, Be Cu



Round Gun Arms  
Class 3 Alloy, Be Cu



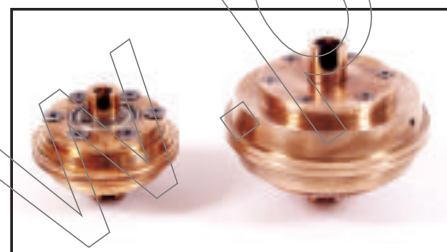
Electrodes, Shanks and holders



Projection Welding Electrodes



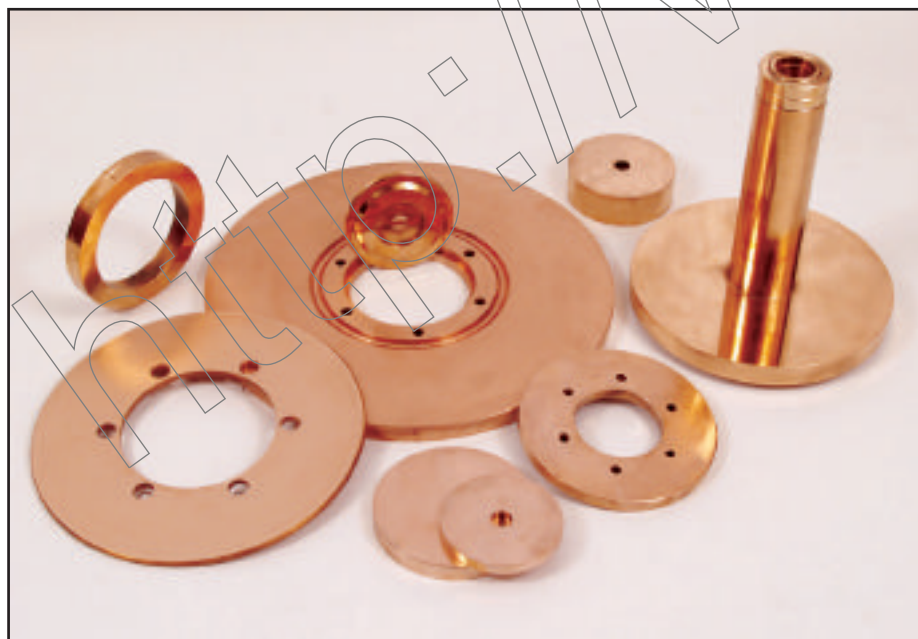
Holders



Mercury Filled Rolls



Threaded Adaptors



Seam Welding Wheels

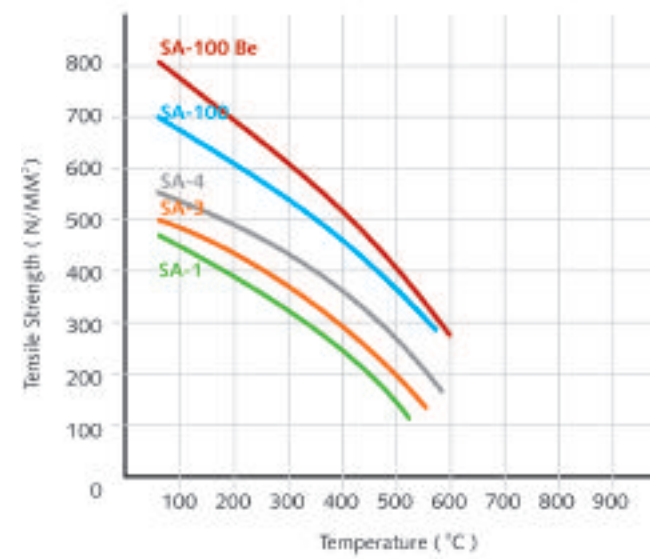


Swivel Head / Swing Head Electrodes

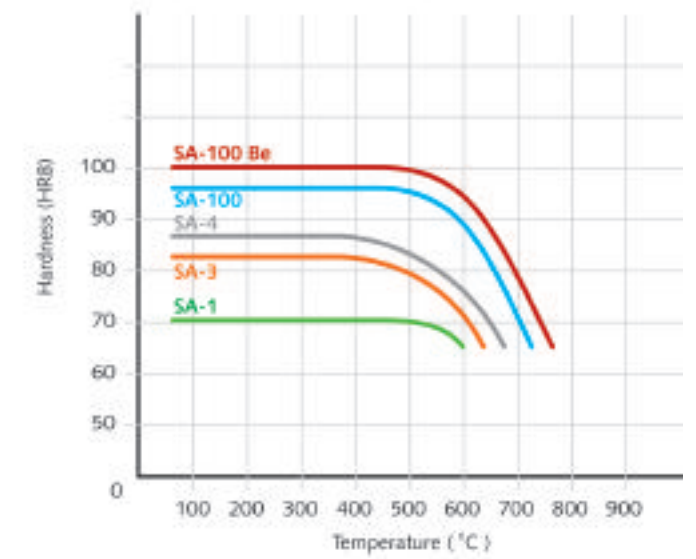
SEAM - NASH has its own most modern non-ferrous foundry where each and every Gun arm is processed under strict quality checks. Every SEAM - NASH Guns casting is internally cooled with water tubes which extend through the entire length of current path. These water tubes are cast in place and are accessible from both sides of Gun.

### Material Characteristics

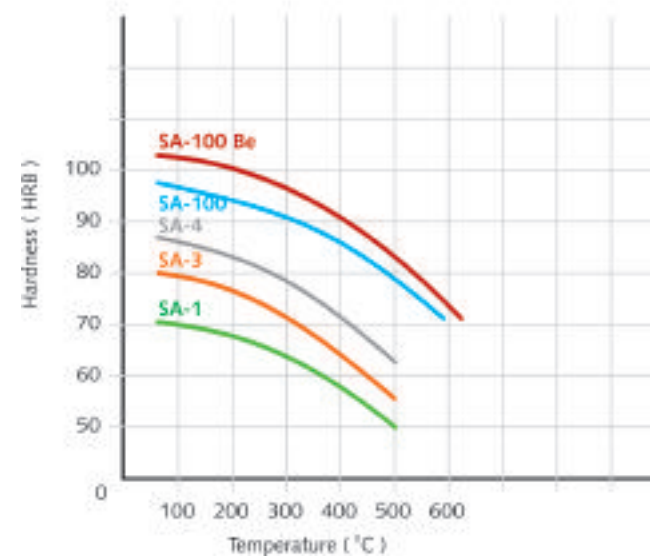
HIGH TEMPERATURE STRENGTH



ROOM TEMPERATURE HARDNESS AFTER ONE HOUR HOLDING AT HIGH TEMPERATURE



HIGH TEMPERATURE HARDNESS



ROOM TEMPERATURE CONDUCTIVITY AFTER HOLDING ONE HOUR AT HIGH TEMPERATURE

