# Round Steel Bars





# VISION

To be a leading local manufacturer and reliable partner providing engineered products and solutions to our customers.

# MISSION

### Supporting the socio-economic development of the Kingdom.

- Enhance local content through technology transfer and human capital development.
- Contribute to the development of Oil & Gas, Water and upcoming industrial initiatives.

### Manufacturer of engineered metal products and provider of solutions to our customers.

- Exceed customer expectations through partnerships, high quality and timely delivery.
- Focus on operational excellence in the manufacturing of engineered products.

### Involved proactively with our key stakeholders.

- Care for our employees, community and the environment.
- Maximize shareholder value through innovation and effective resource utilization.

# VALUES

### Commitment

Be reliable and add value to our customers.

### **Empowerment**

Trust our employees to make the right decisions.

### Integrity

Show transparency in everything we do.

### Excellence

Operate professionally, safely and effectively.

### Collaboration

Deliver through cooperation and team work.







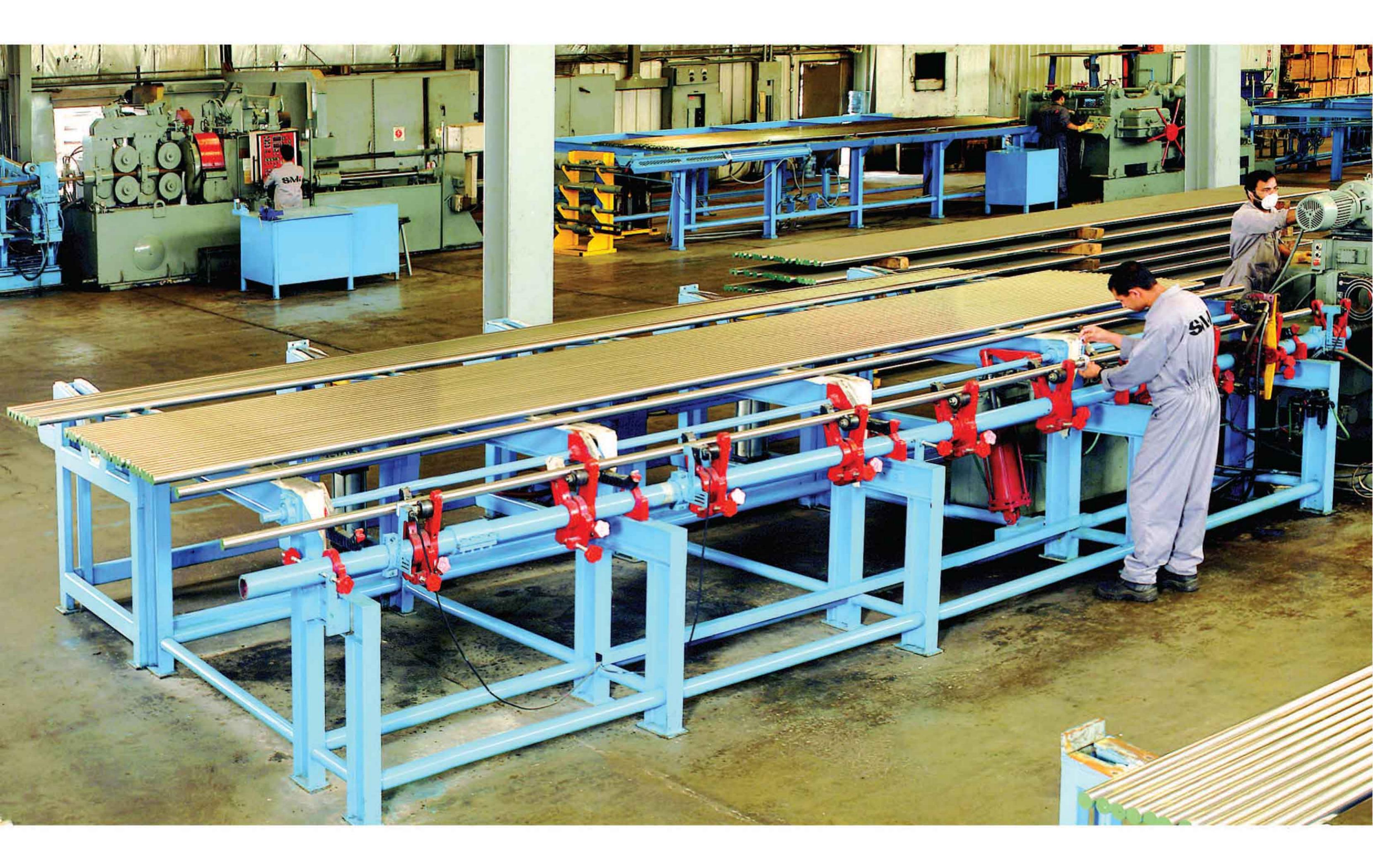
# Saudi Mechanical Industries Company

SMI is a world-class precision manufacturing company, offering a comprehensive service with emphasis on total customer satisfaction. With a dedicated and experienced team of skilled personnel, we provide an efficient service to achieve the required specifications and quality set by our customers.

Under licensed from Rovatti Pump (Italy), Saudi Mechanical Industries (SMI) manufactures horizontal end suction pumps (SNE series). SMI is providing a complete range of mechanical or packed gland seal pumps for industrial, irrigation, municipal and fire-fighting applications.

- Since 1982 SMI, manufactures and develops pumps for submersible and surface installations.
   Over the years the Company has diversified its activity from the production of pumps for agricultural applications to include pumps for industry, drainage, and sewage.
- SMI offers a full range of SNE Rovatti designed horizontal end suction pumps with capacities up to 1300 CMPH (5720 GPM) and heads up to 150 m (492 feet).

# Manufacturing

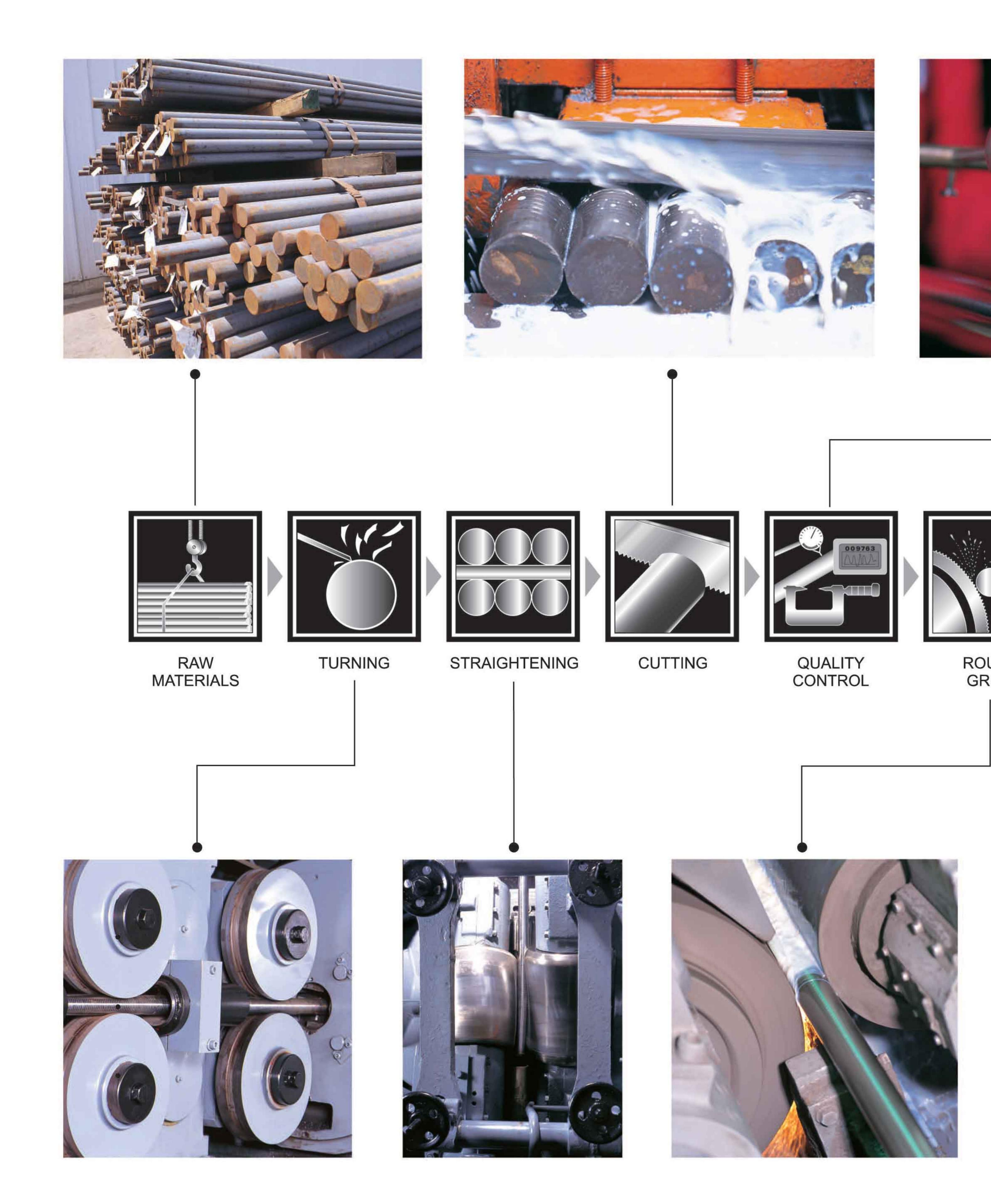


- Precision manufacturing equipment ensuring products to the required specifications of surface finish, straightness and diameter (PSQ-pump shaft quality).
- Strict quality control procedures through each stage of processing provide a product of high dimensional accuracy and mechanical properties.
- The use of quality raw materials is always fundamental to SMI ensuring the final product to be of the highest standard.



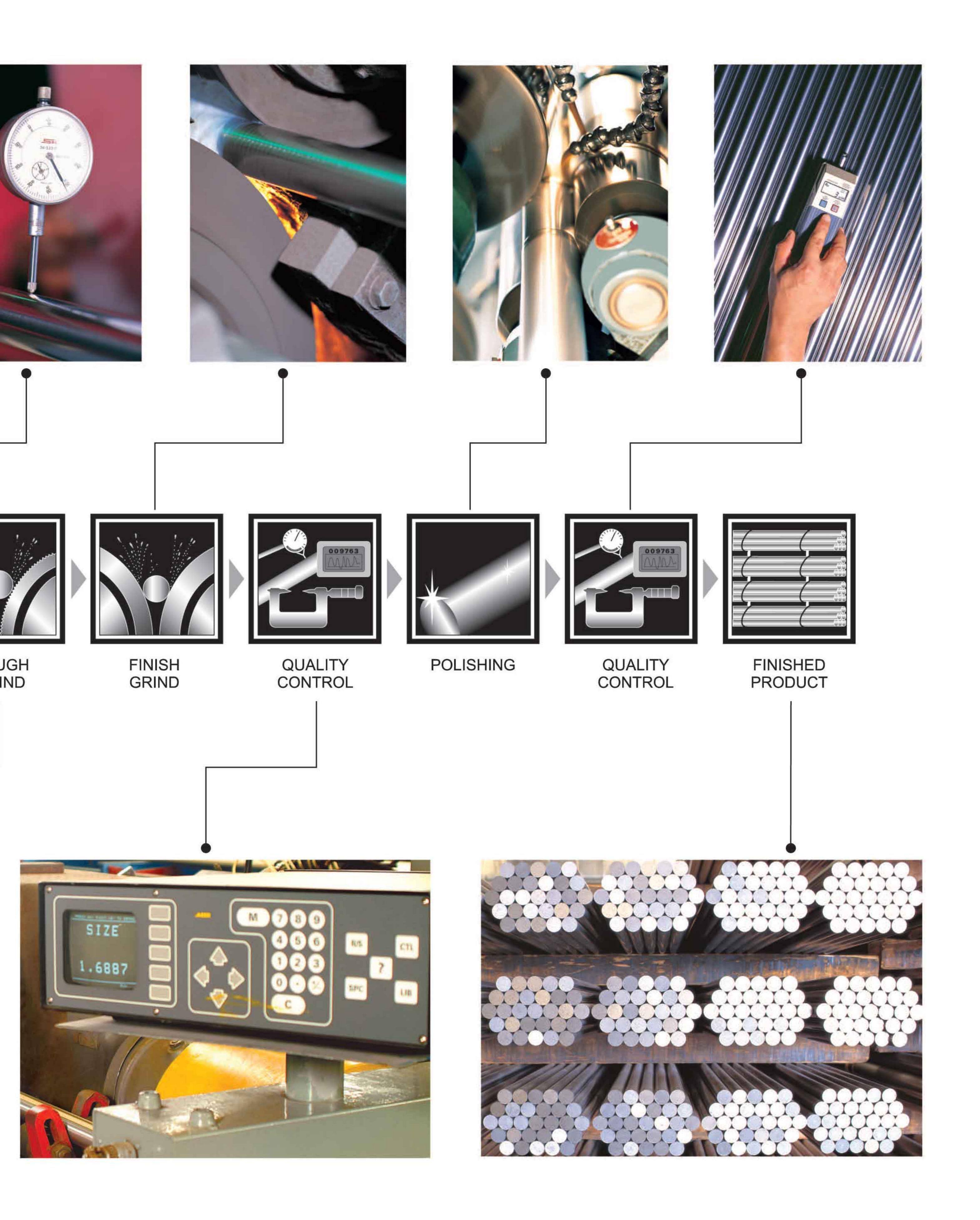


# PRODUCTS PRODUCTS









### Sizes

Diameter: 3/4 inch (19mm) to 4 inches (100 mm)

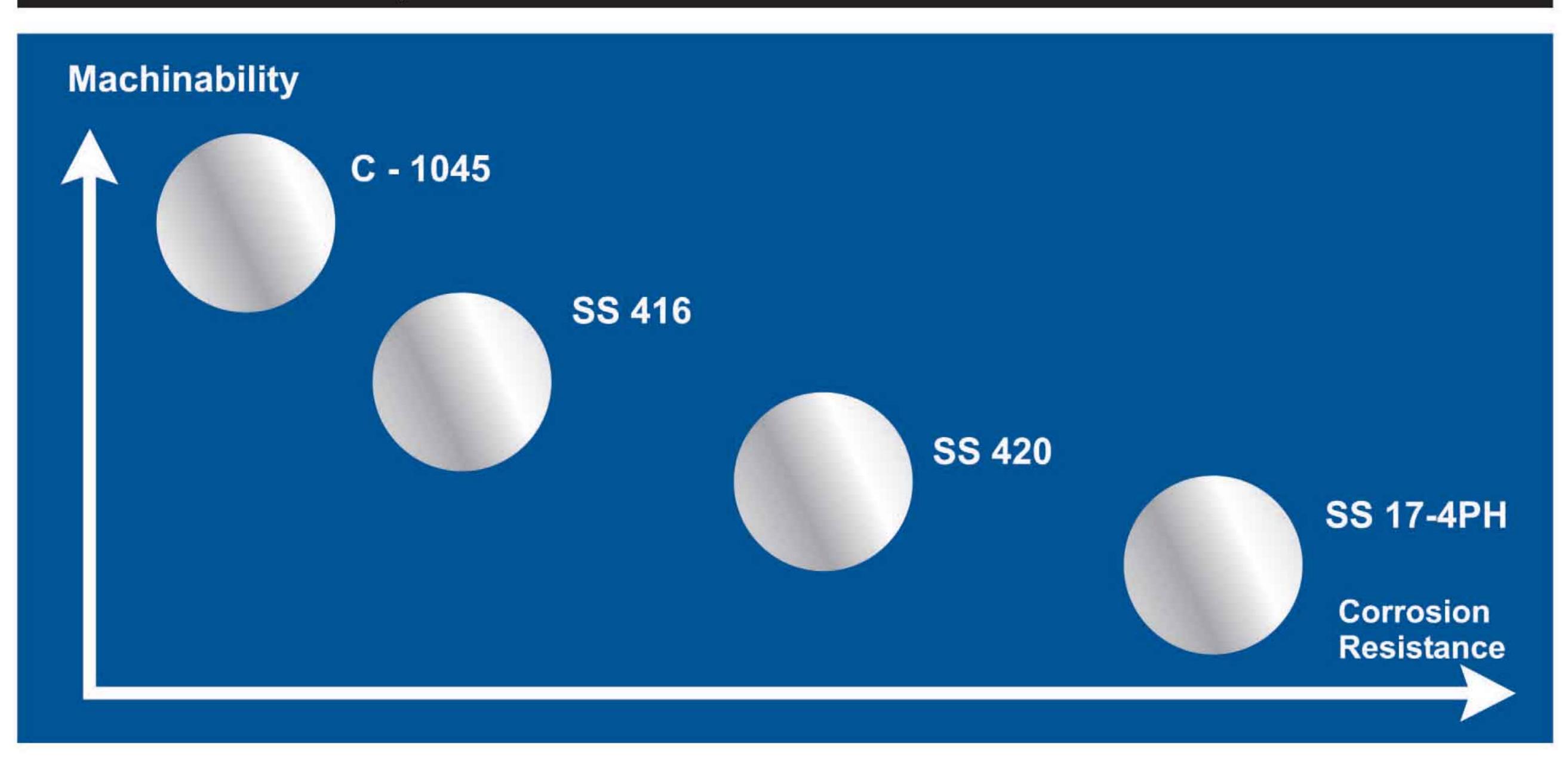
Lengths: 8 feet (2.5 meters) to 25 feet (7.6 meters)

### Tolerances

RANGE	LENGTH		STRAIGHTNESS	SURFACE FINISH			
		3/4(19) - 1 1/2 (38)	1 11/16 (43) - 2 1/2 (63)	2 11/16 (68) - 4 (100)	Per 10 ft (3.0 m)	RMS	
MIN.	0.00 (0.00)	0.002 (0.05)	0.003 (0.075)	0.004 (0.1)		16	
MAX	1 (30)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.005 (0.127)	40	

UNITS: inch (mm)

## Chemical Properties



STANDARD & TYPE	RANGE	CHEMICAL COMPOSITION (%)									
STANDAND & TIFE		С	Si	Mn	Р	Ni	Cr	Cu	s	Мо	Nb
CARBON STEEL	MIN	0.43	0.025	0.60						1.1127	
ASTM A108 GR 1045	MAX	0.50	0.25	0.90	0.04	0.10	0.15	0.30	0.05	0.02	0.015
STAINLESS STEEL	MIN	0.08	Pierre				11.50				
ASTM A276 T410	MAX	0.15	1.00	1.50	0.04	0.75	13.50		0.03		
STAINLESS STEEL	MIN	0.10		0.70			12.00		0.15		
ASTM A276 T416	MAX	0.15	1.00	1.25	0.06	0.40	14.00	0.10	0.35	0.06	
STAINLESS STEEL	MIN	0.16	10000				12.00				
ASTM A276 T420	MAX	0.25	1.00	1.00	0.04	0.50	14.00		0.03		
CHROME NICKLE MOLY	MIN					3.00	15.00	3.00			0.15
STAINLESS STEEL 17-4PH	MAX	0.07	0.70	1.00	0.04	5.00	17.00	5 .00	0.025	0.60	0.45





## Mechanical Properties

TYPE	CARBON STEEL	ST	AINLESS STE	SPECIALTY STAINLESS		
	C1045	410	416	420	17 - 4PH	
TENSILE STRENGTH (MIN)	95000 (655)	75000 (500)	100000 (690)	125000 (850)	135000 (930)	
YIELD STRENGTH (MIN)	80000 (550)	60000 (400)	85000 (565)	100000 (690)	105000 (720)	
ELONGATION (%)	10	25	20	20	15	
REDUCTION OF AREA (%)	25	50-70	40-70	38-55	50	
HARDNESS NO. (MIN) (MAX)	160 240	120 200	230 260	200 240	280 400	

UNITS: PSI (Mpa)

## Weight Chart

AMERICAN MEASURES					METRIC MEASURES						
SHAFT	UNIT	NOMINAL LENGTH (PLAIN EN		END)	SHAFT	UNIT	NOMI	NOMINAL LENGTH (PLAIN END)			
DIA. INCH	Lbs./ft.	8 (ft)	10 (ft)	16 (ft)	20 (ft)	DIA. mm	Kg./ m.	2.5 (m)	3 (m)	5 (m)	6 (m)
3/4	1.50	12.0	15.0	24.0	30.0	10	0.00	<i>E E 7</i>	0.00	44.45	10.00
7/8	2.05	16.4	20.5	32.8	41.0	19	2.23	5.57	6.69	11.15	13.38
15/16	2.35	18.8	23.5	37.6	47.0			7.47	8.97	14.95	17.94
1	2.67	21.4	26.7	42.7	53.4	22	2.99				
<b>1</b> - 3/16	3.77	30.2	37.7	60.3	75.4	0.4	3.55	8.87	10.65	17.75	21.30
<b>1</b> - 1/4	4.17	33.4	41.7	66.7	83.4	24					
<b>1</b> - 7/16	5.52	44.2	55.2	88.3	110.4	25	3.86	9.65	11.58	19.3	23.16
1- 1/12	6.01	48.1	60.1	96.2	120.2	25					
<b>1</b> - 11/16	7.61	60.9	76.1	121.8	152.2	28	4.84	12.10	14.52	24.2	29.04
1- 3/4	8.18	65.4	81.8	130.9	163.6	20					
<b>1</b> - 15/16	10.03	80.2	100.3	160.5	200.6	30	5.56	13.90	16.68	27.80	33.36
2	10.69	85.5	106.9	171.0	213.8	30	5.50	10.90	10.00	27.00	00.00
2- 3/16	12.78	102.2	127.8	204.5	255.6	32	6.32	15.80	18.96	31.60	37.92
2- 1/4	13.53	108.2	135.3	216.5	270.6	02					
2- 7/16	15.88	127	158.8	254.1	317.6	35	7.53	18.83	22.59	37.65	45.18
2- 1/2	16.70	133.6	167.0	267.2	334.0	00					
2- 11/16	19.29	154.3	192.9	308.6	385.8	38	8.90	22.25	26.70	44.50	53.40
2- 15/16	23.06	184.5	230.6	369.0	461.2		0.00	LL.LU	20.70	44.50	33.40
3- 3/16	27.15	217.2	271.5	434.4	543.0	43	11.42	42 28.55	34.26	57.10	68.52
3- 7/16	31.58	252.6	315.8	505.3	631.6			20.00			
3- 11/16	36.35	290.8	363.5	581.6	727.0	49	14.83	37.08	44.49	74.15	88.98
3- 15/16	41.44	331.5	414.4	663.0	828.8	55	18.68	46.7	56.04	93.40	112.10

<sup>\*</sup> All above lengths are nominal; for actual weight, measurement to scale is recommended

# Quality Control

The manufacturing process is controlled by modern feed back equipment, using lasers, thus assisting process traceability. This, coupled with the capability to offer material certification ensures the consistency required by customers demanding high specification materials.

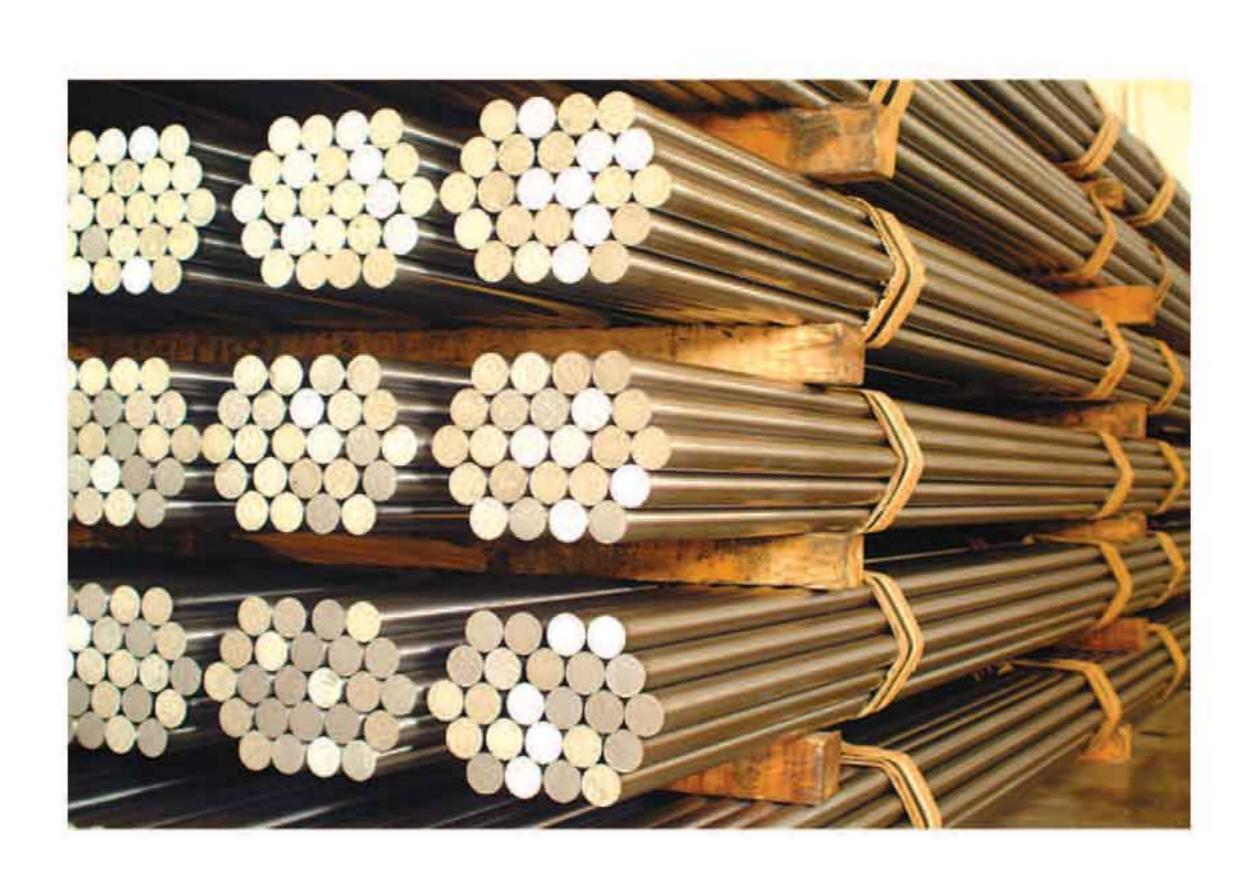




# Export

SMI stocks C1045, 416 Stainless Steel and 17-4 PH Cond 1150 in PSQ finish, sizes from 1"(25mm) to 4" (100mm). Other sizes and material are available.

Finished products are stocked according to strict regulations, ensuring the product quality is preserved as it reaches our customers, as new as it first rolled off our processing plant.













الشركة السعودية للصناعات الميكانيكية SAUDI MECHANICAL INDUSTRIES CO.