



TENSAMANG™

# MANGANESE STEEL

Genuine Hadfield 11-14% Manganese Steel is designed to work harden with impact while maintaining good ductility and toughness. Work hardening allows for material to flow effortlessly, minimizing friction and boosting efficiency.



**CONQUERING DOWNTIME &  
MAXIMIZING UPTIME WITH  
TENSAMANG™**

## WORK HARDENS

up to 550 BHN

## CHEMICAL COMP

Austenitic, non-magnetic steel produced to A128 specifications	
CARBON	1.05 - 1.2%
MANGANESE	11.5 - 14%
SILICON	1.00 MAX
PHOSPHORUS	0.07 MAX

## FABRICATING

### THERMAL TREATMENT

Heated to 1,900+, rapidly quenched for hardness around 200 BHN

### WELDING

Tensaweld Mang-312 compatible  
Ductility increased fusion zone by peening  
Preheat is not recommended

### CUTTING

Plasma, Oxy-Acetylene, Laser, Water jet,  
Abrasive saw cuts

### MACHINING

Not considered a machinable grade  
Clifton Steel is able to drill, tap, and grind

### FORMING

Cold form, hot forming not recommended



## APPLICATIONS

- ✓ Floor Bar Grating
- ✓ Magnet Bottoms
- ✓ Shot Blaster Applications
- ✓ Manganese Separator Drums
- ✓ Liners, Grates
- ✓ Buckets, Hooks

## CONTACT

216.662.6111  
 info@cliftonsteel.com  
 www.cliftonsteel.com

### PLATES

THICKNESS	1/8" - 2 1/2"
WIDTH	40" - 96"
LENGTHS	288"

### ROUND BARS

DIAMETERS	.375" - 6.375"
LENGTHS	up to 288"

### FLAT BAR

- Cut from plate and mill bars from 1/8" thickness
- Widths and lengths to customer specifications

### ANGLES

Stock Mill Angles	Thickness	1/4", 3/8", 1/2"
	Width	2" x 2" - 4" x 4"
	Length	8'

- Custom fabricated angles formed and welded  
 Contact a representative for specific needs

### TUBING

- Custom tubes from 3" diameter & 1/4" wall  
 Contact a representative for specific needs

AVAILABILITY

TENSAMANG™  
**SPECIFICATIONS**