

LOW CARBON STEEL – UT PER SA578 LEVEL C 100% SCAN – CONTOUR BEVEL – NOTCH TOUGHNESS – HIGH  
PRECISION PLASMA CUTTING – ASTM A36 – A572 GR 50 – A588 GR B – A 633 GR C – A871 – A514 GR B-Q  
A514 GR 50 – API 2H GR 50 – EN S355 J2 – S355 J2+N – S690 – S960 – S1100 – ABS EH36 – OXYFUEL CUTTING  
FLAME CUTTING – PLATE ROLLING – CARBON EQUIVALENT – DRILLING AND TAPPING – ASME SA516 GR 55-70  
SA516 GR 11 – SA387 GR 22 – SA387 GR 5 – SA537 CL 1 COLD TEMPERATURE STEEL TCVN  
HOT ROLLING – ASME SECTION VIII. DIV 1 WELDING – LCVN – Z DIRECTIONAL TESTING SULPHIDE SHAPE  
WEAR RESISTANT – AISI – 4130 – 4140 – C1045 – BLANCHARD GRINDING – SURFACE CONDITIONING – MILLING  
CORROSION RESISTANT – AR400F – AR500 – T-21 – BALLISTICS – CE – PRESS BRAKE BENDING – PER PLATE TESTING  
HYDROGEN BLENDED – SUPPLEMENTARY TESTING – GEOMETRIC DIMENSION TOLERANCING – INTERPOLATED  
DIMENSIONS – CHROME MOLY STEELS – SHOT BLASTING – COUNTER BORE – ISO 9001

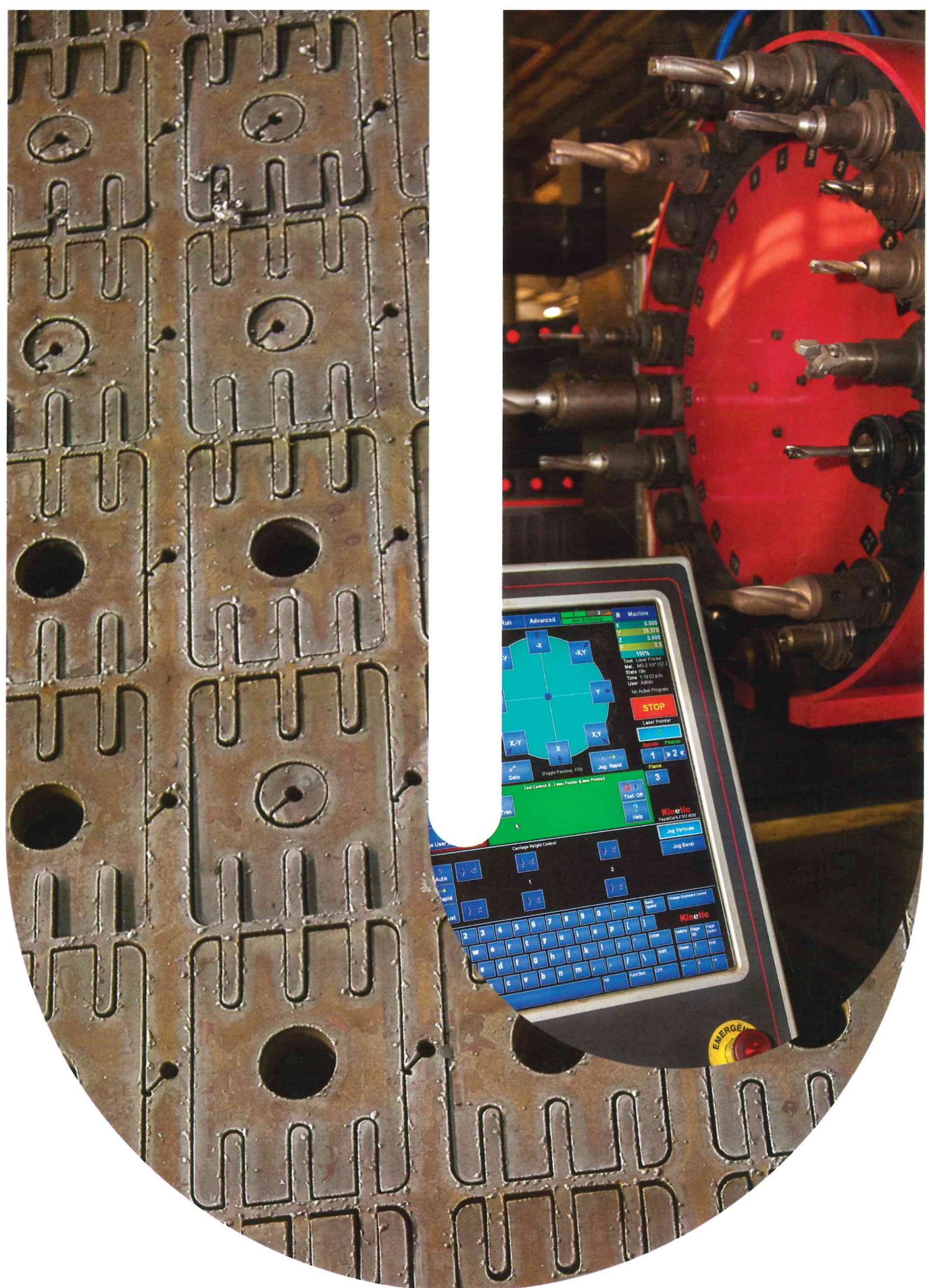
# WE SPEAK STEEL



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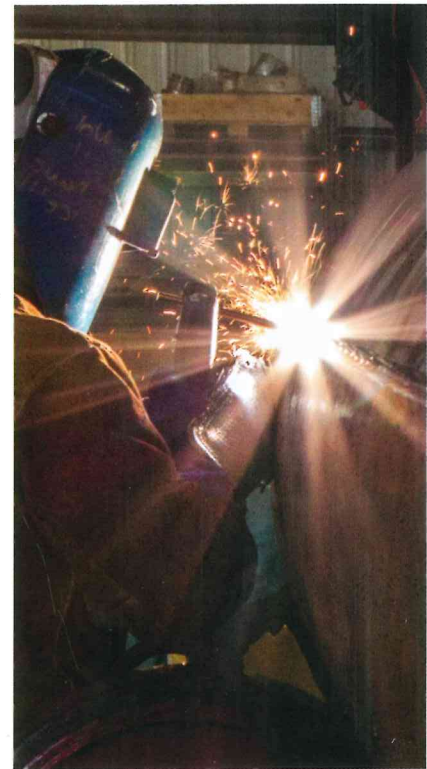


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## WE SPEAK STEEL

Universal Steel America is a premier processor and distributor of hard-to-find carbon and alloy steel plates including extra heavy thicknesses. With a revolving 15,000 ton inventory and state of the art processing equipment, USA is poised to solve your unique production problems. We understand tolerances, supplemental testing, ASME, API, EN, AR, ASTM, armor requirements and production schedules requiring on-time performance. Capabilities include the ability to burn, contour bevel, drill, tap, counter bore, mill, grind, bend, roll, weld, shot blast and provide



## STRUCTURAL QUALITIES (ASTM & EN)

ASTM	Thickness Range	Width Range	Length Range	Application Description	Yield (min)	Tensile (min)	Elong. (%min)	Heat Treat	CE	Supplemental Testing
A36	.187"-12.5"	120"	480"	Standard 36 ksi carbon steel	36	60-80	2"-23%		*	
A572-50	.187"-4"	.96"	480"	HSLA Vanadium or Niobium bearing	50	65	2"-21%		*	A770 Thru Thickness CVN
A572-42	4.5"-6"	.96"	480"	LCVN upon request	42	60	2"-21%			
A588	.187"-4"	.96"	480"	Copper bearing for atmospheric corrosion resistance	50	70	2"-21%		*	
A633-C	.375"-4"	96"	480"	A normalized steel with excellent toughness	50	70-90	2"-23%	Normalized	*	TCVN 30 ft/lbs@-40f
A709-50	.187"-4"	96"	480"	Bridge steel with good impacts	50	63.5	2"-21%		*	CVN
A871-65	.375"-4"	96"	480"	Bridge steel with corrosive properties	65	80	2"-17%		*	CVN
A514 Gr. B,H,F,Q,E,S	.187"-6"	96"	480"	A quench & tempered steel with increasing alloying per range of thickness	100	120	2"-15-18%	Quenched & Tempered	*	A770 Thru Thickness CVN
<b>EN</b>				<b>EUROPEAN NORM 10025 : 2004</b>						
S235	20-100mm	96"	480"	European norm similar to ASTM A36	34	60	2"-22%		*	
S355 Gr. J2, JR2+N JR2+Z25	20-100mm	96"	480"	50 ksi yield steel with LCVN and other optional testing per specification	50	70	2"-17%	TMCP	*	355 Mpa or 51,586 psi N=Normalized condition Z=thru thickness test
S690	.375"-8"	96"	480"	An accelerated cooled 100 ksi yield steel with excellent surface, welding and forming capabilities	100	120	2"-14%	TMCP	*	A770 Thru Thickness CVN
S780LE	.375"-1.25"	96"	480"	113 ksi yield accelerated cooled steel	113	135	2"-22%	TMCP	*	
S960	.375"-3"	96"	480"	139 ksi yield accelerated cooled steel	139	170	2"-15%	TMCP	*	
S1100	.375"-1.00"	96"	480"	160 ksi yield accelerated cooled steel	160	200	2"-8%	TMCP	*	

\* CE (long formula) available upon request



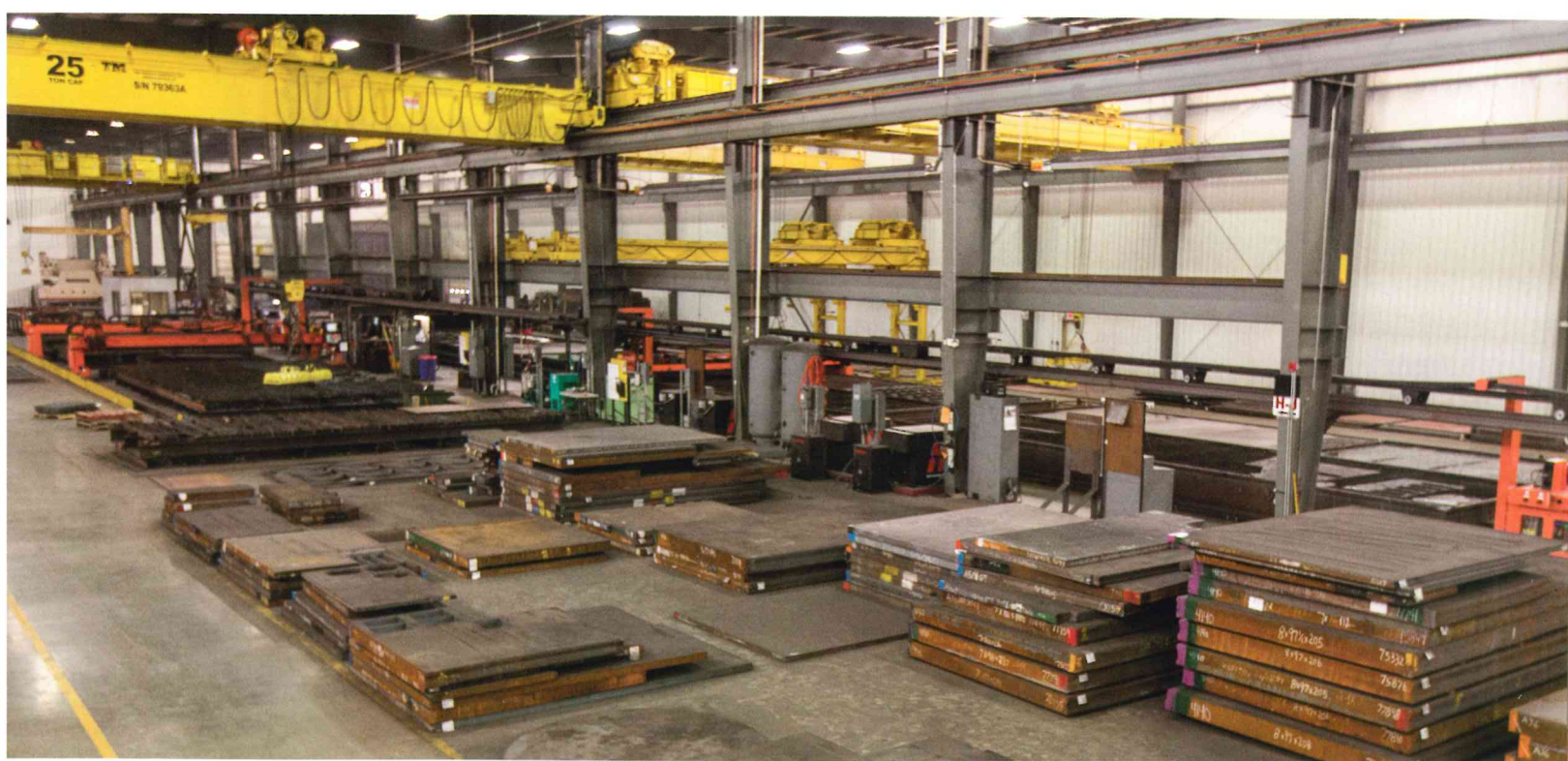
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## PRESSURE VESSEL QUALITIES

ASTM	Thickness Range	Width Range	Length Range	Application Description	Yield (min)	Tensile (min)	Elong. (%min)	Alloying Elements	Heat Treat	CE	Supplemental Testing
SA516 Grade 60,65,70	.187"-12"	120"	480"	For moderate service stocked both in as-rolled and normalized condition with LCVN per SA20 HIC qualities available	38	70	2"-21%		Normalized	*	LCVN per SA20
SA387 Grade 11	.187"-4"	120"	480"	A Chrome-Moly steel for high temperature & mild corrosive service. Available in Class 1 & 2	35	60-85	2"-22%	1.25 Cr 0.5 Mo	Vacuum degassed normalized & tempered	*	
SA387 Grade 22	.187"-4"	120"	480"	Contains higher amounts of chrome & moly for higher temperature service. Available in Class 1 & 2	45	75-100	2"-18%	2.25 Cr 1.0 Mo	Vacuum degassed normalized & tempered	*	
SA537 Class 1	.375"-4"	120"	480"	A normalized steel with excellent cold temperature toughness	50	70-90	2"-22%		Normalized	*	LCVN

\* CE (long formula) available upon request



## MARINE QUALITIES

Quality	Thickness Range	Width Range	Length Range	Application Description	Yield (min) (ksi)	Tensile (min) (ksi)	Elong. (%min)	Heat Treat	CE	Supplemental Testing
API-2H Gr. 50	.375"-4"	120"	480"	Primarily for offshore platform applications, normalized with supplemental testing	50	70-90	2"-23%	Normalize	*	S1, S3, S4, S5
ABS EH,DH-36	.375"-4"	120"	480"	Normalized ABS plate for tighter marine specifications. CVN provided	51	71-90	2"-22%		*	CVN

\* Carbon Equivalent (long formula) provided upon request

## ABRASION RESISTANT QUALITIES

Quality	Thickness Range	Width Range	Length Range	Application Description	Alloying Elements	Heat Treat	BHN	CE
AR Regular	1/4"-4"	.96"	480"	Hi carbon wearplate not recommended for forming		None	200	*
AR 400f	1/8"-4"	96"	288"	A Formable thru hardened wearplate with excellent impacting and welding characteristics		As Quenched	360 (min)	<40 to .75" *
AR 500	3/8"-3"	96"	288"	A Clean, flat as-quenched wearplate with excellent welding characteristics		As Quenched	450 (min)	
T21* *	1/4"-2"	96"	288"	A Titanium bearing wearplate with exceptional sliding wearlife exceeding AR 500, weldable and formable	Titanium	As Quenched	450 (typical)	
Wunder Form	3/8"-1.5"	96"	288"	With formability similar to A572-50 and sliding resistance comparable to AR 400		As Quenched	320 (min)	

\* Carbon Equivalent (long formula) available upon request

\*\* Trademark

## CARBON AND TOOLING STEEL QUALITIES

Quality	Thickness Range	Width Range	Length Range	Application Description	Heat Treat	BHN
C1045	.375"-4"	>96"	>240"	40-42 carbon steel for machining		
4130	2"-8"	>96"	>240"	Alloy machining steel		195-240
4140	.250"-12"	>96"	>240"	As Rolled 40 carbon alloy machining steel		200-262
4140PH	.500"-12"	>96"	>240"	Normalized and Tempered 40 carbon alloy steel	Normalize Temper	262-321



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## PLATE PROCESSING CAPACITIES

Plate Cutting

Contour Bevelling

Drilling, Tapping, Counterboring

Milling And Grinding

Plate Bending

Plate Rolling

ASME Welding

Surface Conditioning

Certification & Inspection

Physical Plant And Lifting Capacities



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# PLATE PROCESSING CAPACITIES

## PLATE CUTTING

5 multi-torch oxyfuel machines 18'-20' wide with 14" thick cutting capacity  
Tolerances: +/- 0.189" dependent upon thickness

4 high definition HPR 400 plasma machines 10' x 20' wide with 1.5" cutting capacity  
Tolerances: +/- 0.0625" dependent upon thickness

2 Kinetic process center with HPR 400 plasma and oxyfuel torches  
Tolerances: HPR 400 +/- 0.020" dependent upon thickness

## CONTOUR BEVELLING

2 Kinetic process centers with five axis HPR 400 plasma and oxyfuel contour bevel heads  
Tolerances: +/- 0.0625" dependent upon thickness

1-five axis oxyfuel contour bevel head  
Tolerances: +/- 0.189" dependent upon thickness

## DRILLING, TAPPING AND COUNTERBORING

2 Kinetics process centers with tooling capacity to 4" diameter  
Tolerances: Drilling +/- 0.002" hole to hole, with interpolated holes +/- 0.010"

## MILLING AND GRINDING

2 Kinetics process centers.  
Milling Tolerances: +/- 0.005"  
2 Blanchard Grinders 48" and 60" diameter  
Tolerances: +/- 0.005"

## PLATE BENDING

1 Cincinnati 750 ton hydraulic pressbrake with 14' opening, CNC controls

## PLATE ROLLING

1 Sertom 30-140 plate roll with cold bending capacity thru 4" thick at 42" minimum ID

1 Sertom 31-60 plate roll with cold bending capacity thru 2.5" thick at 36" minimum ID

1 Bertsch 10-100 plate roll with cold bending capacity thru 0.75" thick at 19" minimum ID

## ASME WELDING

Certification to ASME Section VIII Div 1 (U Stamp) and ASME Section 1 (S Stamp)

6- subarc welding machines with weld capacity thru 10' diameter cylinders

## SURFACE CONDITIONING

1-Ernst deburring machine 48" wide capacity

1-Viking shotblast cabinet 60" wide capacity

## CERTIFICATION AND INSPECTION

ISO 9001 SA20 ASME Section VIII Div 1

## PLANT FACILITY AND LIFTING CAPACITIES

210k total square feet under hook. 19 magnetized cranes 2T-25T, 50T maximum lift

