

LPR Global

Hot-Formed & Cold-Formed Pressure Vessel Heads for Heat Recovery Steam Generators

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About Us

LPR’s hot and cold forming hemi-head facility in South Korea is a leading provider of pressure vessel heads for the petrochemical, cryogenics, LNG and refinery industries. We specialize in making hot-formed and cold-formed one-piece hemispherical and elliptical heads for utility vessels, including boilers, steam drums, heat recovery steam generators and heat exchangers. A variety of materials can be used based on the customer’s request, including carbon steel, alloy steels, stainless steels, duplex stainless steels, nickel alloys and aluminum. Our facility is certified to ISO and DNV standards, and equipped with a wide range of hydraulic forming presses with capacities from 300 tons to 4,500 tons. We have served as a sub-contractor of pressure vessel heads to global EPC clients and pressure vessel and heat recovery steam generator manufacturers for over two decades. Our client list includes major global players such as *GE, Sumitomo, VOGT Group, Amec Foster Wheeler, CMI Group, Doosan Heavy Industry* and *Toyo Engineering*.

Project Experience and Capabilities

Based on A516-70 Material 2:1 Elliptical Tank Head

Product	Forming Process	Diameters		Thicknesses		Weight	Material
		Min	Max	Min	Max		
Heads	Cold	350	6,500	5	135	Max 30 ton/set	Carbon steel, low-alloy steel, high-alloy steel, non-ferrous
	Hot	500	3,600	30	168		
Expansion Joints	Cold						
Floating Heads	Cold	350R	1,500R	5	175		
Knuckle Cone	Cold	500	6,500	5	135		

Hot-Formed 2:1 Elliptical Head

	<=10	<=20	<=30	<=40	<=50	<=60	<=70	<=80	<=90	<=100	<=110	<=120	<=130	<=140	<=150	<=160
D<=500		H	H	H	H	H	H	H	H							
D<=700		H	H	H	H	H	H	H	H							
D<=1,000		H	H	H	H	H	H	H	H							
D<=1,200		H	H	H	H	H	H	H	H	H	H					
D<=1,400		H	H	H	H	H	H	H	H	H	H	H				
D<=1,600		H	H	H	H	H	H	H	H	H	H	H	H			
D<=1,800		H	H	H	H	H	H	H	H	H	H	H	H	H	H	H
D<=2,000			H	H	H	H	H	H	H	H	H	H	H	H	H	H
D<=2,200			H	H	H	H	H	H	H	H	H	H	H	H	H	H
D<=2,400			H	H	H	H	H	H	H	H	H	H	H	H	H	H
D<=2,600			H	H	H	H	H	H	H	H	H	H	H	H	H	H
D<=2,800			H	H	H	H	H	H	H	H	H	H	H	H	H	H
D<=3,000			H	H	H	H	H	H	H	H	H	H	H	H	H	
D<=3,200				H	H	H	H	H	H	H	H	H	H	H	H	
D<=3,400				H	H	H	H	H	H	H	H	H	H	H		
D<=3,600				H	H	H	H	H	H	H	H	H	H	H		

Hot-Formed Hemispherical Head

	20~29	<=30	<=40	<=50	<=60	<=70	<=80	<=90	<=100	<=110	<=120	<=130	<=140	<=150	<=160	
D<=500	H	H	H	H	H	H	H									
D<=600	H	H	H	H	H	H	H									
D<=700	H	H	H	H	H	H	H									
D<=800	H	H	H	H	H	H	H	H								
D<=900	H	H	H	H	H	H	H	H	H							
D<=1,000	H	H	H	H	H	H	H	H	H	H						
D<=1,200	H	H	H	H	H	H	H	H	H	H	H					
D<=1,400	H	H	H	H	H	H	H	H	H	H	H	H				
D<=1,600		H	H	H	H	H	H	H	H	H	H	H	H	H	H	
D<=1,800		H	H	H	H	H	H	H	H	H	H	H	H	H	H	
D<=1,900		H	H	H	H	H	H	H	H	H	H	H	H	H	H	
D<=2,000		H	H	H	H	H	H	H	H	H	H	H	H	H		
D<=2,100		H	H	H	H	H	H	H	H	H	H	H	H			
D<=2,200																Shall be determined after confirm the Tangent length

Cold-Formed Elliptical Head

	5~10	<=20	<=30	<=40	<=50	<=60	<=70	<=80	<=90	<=100	<=110	<=120	<=130	<=140	<=150	<=160
400~500	COLD	COLD	COLD	COLD	COLD											
D<=700	COLD	COLD	COLD	COLD	COLD	COLD										
D<=1,000	COLD	COLD	COLD	COLD	COLD	COLD										
D<=1,200	COLD	COLD	COLD	COLD	COLD	COLD	COLD									
D<=1,400	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD							
D<=1,600	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD						
D<=1,800	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD					
D<=2,000	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD			
D<=2,200	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD		
D<=2,400	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	
D<=2,600	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD
D<=2,800	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD
D<=3,000	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD
D<=3,200	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD
D<=3,400	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD
D<=3,600	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD
D<=3,800	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD
D<=4,000		COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD
D<=4,500		COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD				
D<=5,000		COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD						
5001~6500		COLD	COLD	COLD	COLD	COLD	COLD	COLD	COLD							

Cold-Formed Hemispherical Head

	10~19	<=20	<=30	<=40	<=50	<=60	<=70	<=80	<=90	<=100	<=110	<=120	<=130	<=140	<=150	<=160	<=170	<=180
D<=400	Mold	Mold	Mold	Mold														
D<=600	Mold	Mold	Mold	Mold														
D<=900		Mold	Mold	Mold	Mold													
D<=1000		S.G	S.G	S.G	S.G													
D<=1200		S.G	S.G	S.G	S.G	S.G												
D<=1,400		S.G	S.G	S.G	S.G	S.G	S.G											
D<=1,800		S.G	S.G	S.G	S.G	S.G	S.G											
D<=2,000		S.G	S.G	S.G	S.G	S.G	S.G	S.G										
D<=2,200		S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G									
D<=2,600		S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G								
D<=2,800		S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G							
D<=3,000		S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G						
D<=3,200		S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G					
D<=3,400		S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G				
D<=3,600			S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G
D<=3,800			S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G
D<=4,000				S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G
D<=4,500				S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G			
D<=5,000				S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G	S.G						
D<=5,500				S.G	S.G	S.G	S.G	S.G	S.G	S.G								
6,000~6500				S.G	S.G	S.G	S.G	S.G										

Hot Forming Process



Plate Heating using Electric Furnace



Mold Setting



Mold Pre-Heating



Plate Setting on Female Mold



Transfer to Storage for Natural Cooling



Drawing Out



Pressing



Edge Preparation using Turntable



Non-Destructive Examination (NDE)



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