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ZERO-ring
-RING PIPE



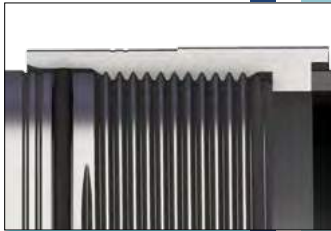
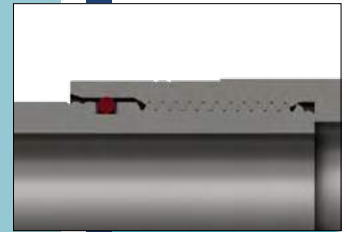
We Included Technology
To Column Pipe, We Manufactured
Zero-ring Column Pipe.



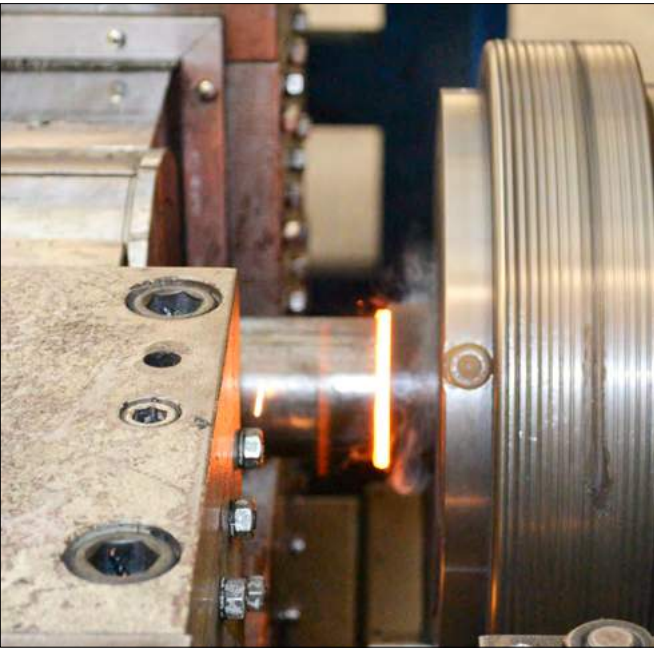
 **Sumpaş**
Boru A.Ş.

ZERO-ring

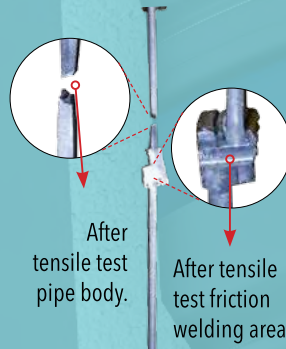
-RING PIPE



By using friction welding and forging technologies, we produced high tensile strength, %100 watertightness and easy installation submersible pump column/riser pipe.



Friction welding tensile test.



After tensile test pipe body.

After tensile test friction welding area.

As seen the friction area is not broken but pipe body has broken.

We can say friction welding is never rupture....

The threaded ends of the pipe wall thickness increase %100 as against to pipe body wall thickness and so increasing the strength of thread.

The coupling (box) is fixing by friction connection method. This friction method is forming defrostand and hot rolling simultaneous operation ,because of these reasons friction welding rupture is impossible. Other welding methods (submerged arc welding, inert-gas welding, electrode welding etc.) weld by consuming the wall thickness damaging.

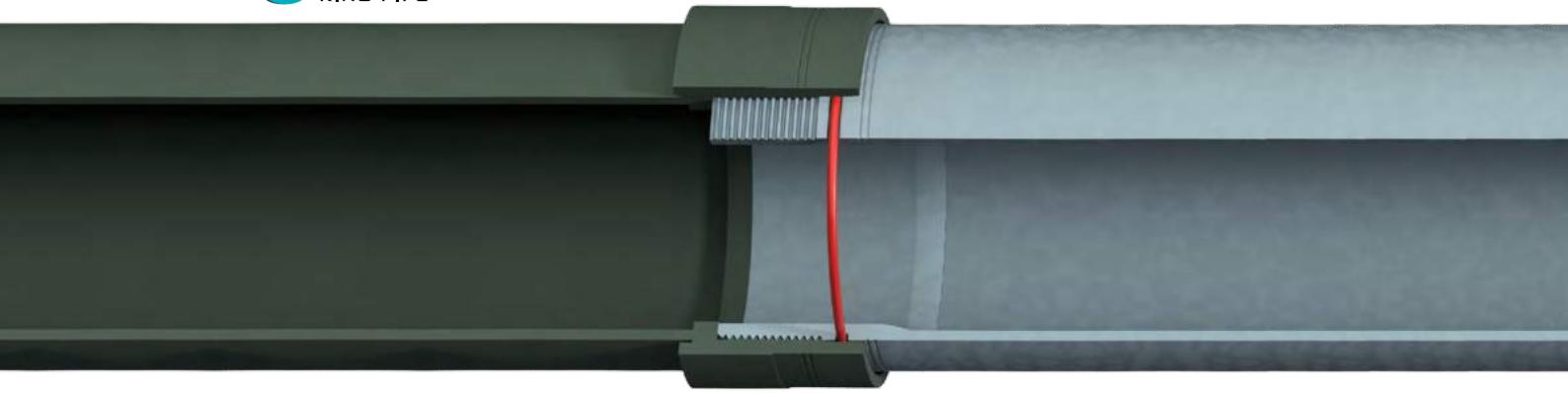
If we compare the rupture between friction welding and other methods, we can say 4mm friction welding is equivalent to 6mm other methods as welding pipe. Friction welding technology is used in air craft industry, OCTG industry, defense industry, automotive industry and other special application. Friction welding is unrivaled...



Column Pipes are threading to upset (thickened) area according to API standards.

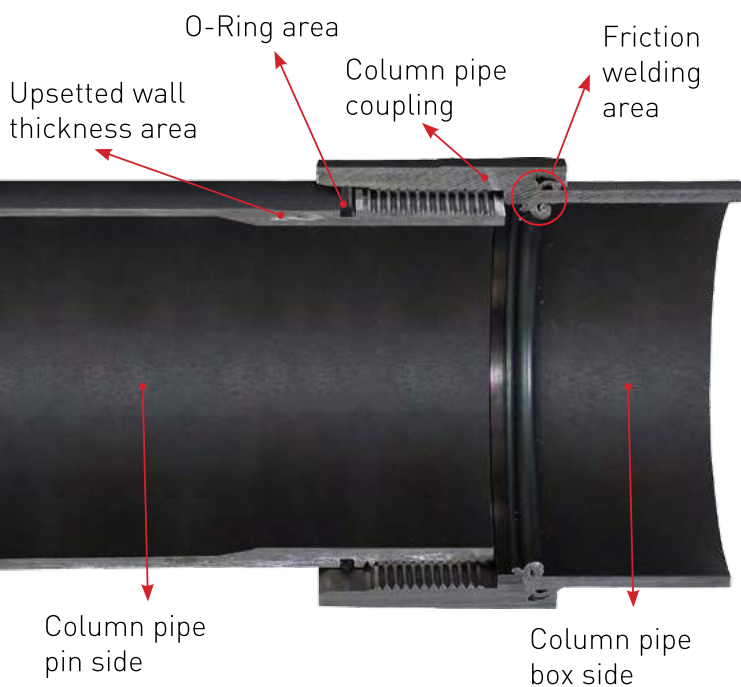


Friction welding is not a welding method, is a joining by hot rolling.



Significance of watertightness;

Sealing o-ring is used on column pipes for ultra sealing even tolerate the mistakes in the course of assembling. Column pipes do not seal on 50 bar water test.



On submersible pump system, efficiency is calculating according to %100 sealing. Leakage always consists on join area of column pipes. For this reason required feature is watertightness from column pipes. These leakage effects pump system %8 - %20 of efficiency. This means that, to get equal to water, %8 - %20 extra paid electric bill.

Water leakage at joining of column pipes threads will decay from column pipe threads area. In a short time distortion at joining of column pipe threads will cause to rupture from threads. This situation will be big cost and big trouble. Drilling well becomes unusable. Our Zero-ring Column Pipes do not seal, do not drip under 50 Bars water pressure.



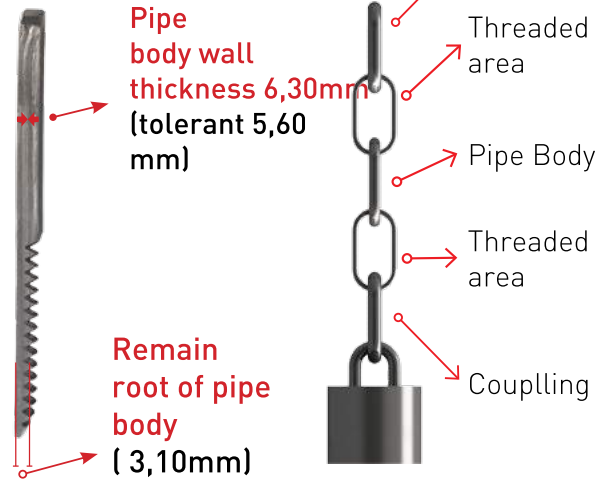
A chain is only as strong as its weakest link...

OTHER CONNECTIONS TYPES OF COLUMN PIPES / RISER PIPES

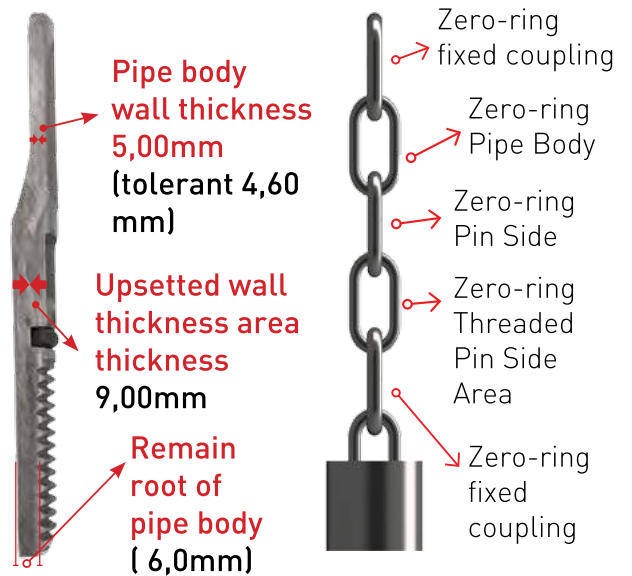


Welding area
Other welding methods (submerged arc welding, inert-gas welding, electrode welding etc.) weld by consuming the wall thickness damaging.

THREADED COLUMN/RISER PIPES



ZERO-RING COLUMN PIPES/RISER PIPES



If describe the Column Pipes string as a chain rings, threaded area is as chain link. Bearing capacity of Zero-ring column pipes is %70 higher than the others.

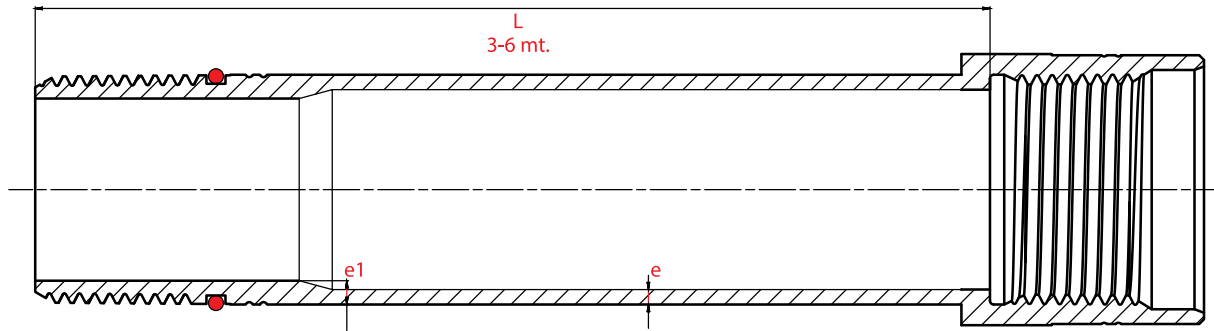
The threaded ends of the pipe wall thickness increase %100 as against to pipe body wall thickness and so increasing the strength of thread. Remaining wall thickness from end of threads is higher than the others.



List of the advantages of Zero-ring Column Pipes

- Our Zero-ring Column pipes do not leak and pump system efficiency does not loose. Energy cost reduce.
- There is no leakage on connection threads. Because of that, deformation and molding non-occurrence on threads.
- The pin end of column pipes wall thickness is %100 as against to pipe body wall thickness. Because of that, in swagger downhole there is no load on threads and in all conditions threads protect and no leakage on connection threads.
- Assembling of Zero-ring Column Pipes is easy than others and shorten the time %50.
- Selecting the different wall thickness and different composition of raw material, available for geothermal deep well pumps.
- In comparison to other column pipes, Zero-ring column pipes are low-cost and highly productive.





LIGHT SERIE FIXED COUPLED ZERO-RING COLUMN PIPES

-Safely assembling up to 350 meters

Diameter (inch)	Diameter (mm)	Wall Thickness	Upsetted Wall Thickness	Package Pieces
1 1/4"	42,4	2,00mm	4,50mm	44
1 1/2"	48,3	2,00mm	4,50mm	37
2"	60,3	2,50mm	5,00mm	24
2 1/2"	76,1	2,50mm	5,00mm	19
3"	88,9	3,00mm	5,50mm	19
4"	114,3	3,50mm	7,00mm	10
5"	139,7	4,00mm	8,00mm	10
6 5/8"	168,3	4,00mm	8,00mm	10
8 5/8"	219,1	4,00mm	8,50mm	7



-Selecting the different wall thickness and different composition of raw material, available for geothermal and aggressive water deep well pumps.

MEDIUM SERIE FIXED COUPLED ZERO-RING COLUMN PIPES



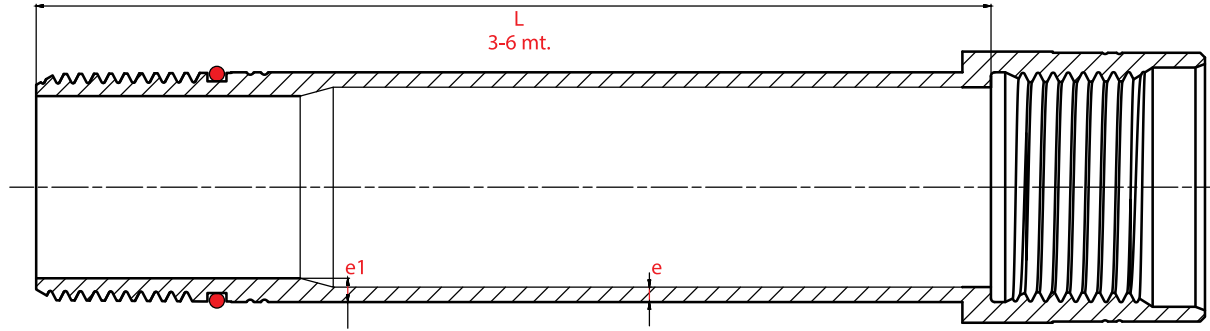
Diameter (inch)	Diameter (mm)	Wall Thickness	Upsetted Wall Thickness	Package Pieces
1 1/4"	42,4	3,25mm	5,50mm	44
1 1/2"	48,3	3,25mm	5,50mm	37
2"	60,3	3,65mm	6,00mm	24
2 1/2"	76,1	3,65mm	6,00mm	19
3"	88,9	4,05mm	6,50mm	19
4"	114,3	4,50mm	8,00mm	10
5"	139,7	5,00mm	8,50mm	10
6 5/8"	168,3	5,00mm	9,00mm	10
8 5/8"	219,1	5,00mm	9,50mm	7

HEAVY SERIE FIXED COUPLED ZERO-RING COLUMN PIPES

-Securely assembling for geothermal and aggressive water deep well pumps.

Diameter (inch)	Diameter (mm)	Wall Thickness	Upsetted Wall Thickness	Package Pieces
1 1/4"	42,4	4,00mm	6,50mm	44
1 1/2"	48,3	4,00mm	6,50mm	37
2"	60,3	5,00mm	7,00mm	24
2 1/2"	76,1	5,00mm	7,00mm	19
3"	88,9	5,00mm	7,50mm	19
4"	114,3	6,00mm	9,00mm	10
5"	139,7	6,00mm	9,50mm	10
6 5/8"	168,3	6,00mm	10,00mm	10
8 5/8"	219,1	6,00mm	10,50mm	7





GALVANISED MEDIUM SERIE FIXED COUPLED ZERO-RING COLUMN PIPES

-Both inside and outside of column pipes Coating is with hot dipped galvanising method.



Diameter (inch)	Diameter (mm)	Wall Thickness	Upsetted Wall Thickness	Package Pieces
1 1/4"	42,4	3,25mm	5,50mm	44
1 1/2"	48,3	3,25mm	5,50mm	37
2"	60,3	3,65mm	6,00mm	24
2 1/2"	76,1	3,65mm	6,00mm	19
3"	88,9	4,05mm	6,50mm	19
4"	114,3	4,50mm	8,00mm	10
5"	139,7	5,00mm	8,50mm	10
6 5/8"	168,3	5,00mm	9,00mm	10
8 5/8"	219,1	5,00mm	9,50mm	7

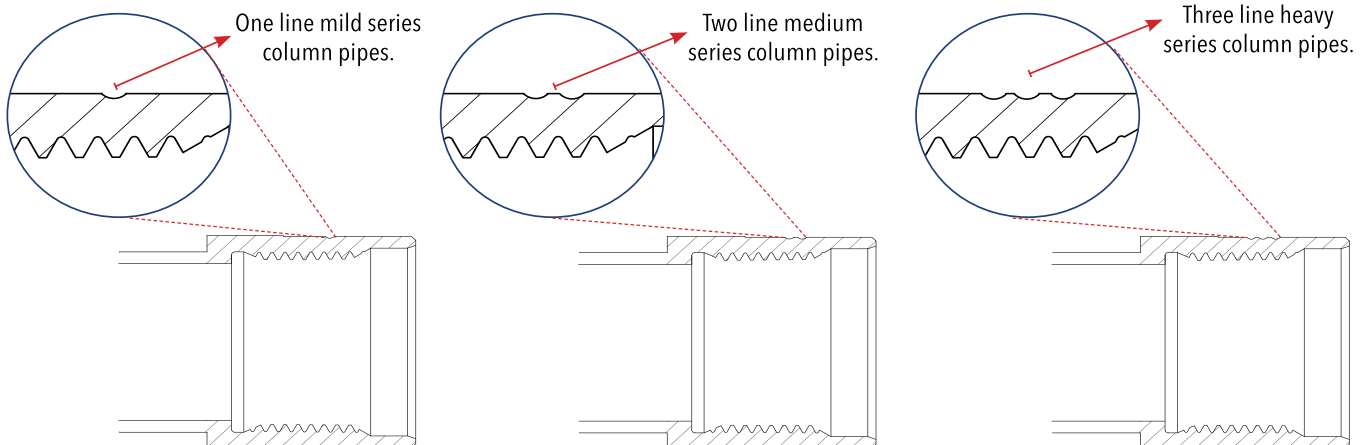
-In AISI 304 316 L Stainless Steel Pipes.

AISI 304 -316 L STAINLESS STEEL FIXED COUPLED ZERO-RING COLUMN PIPES

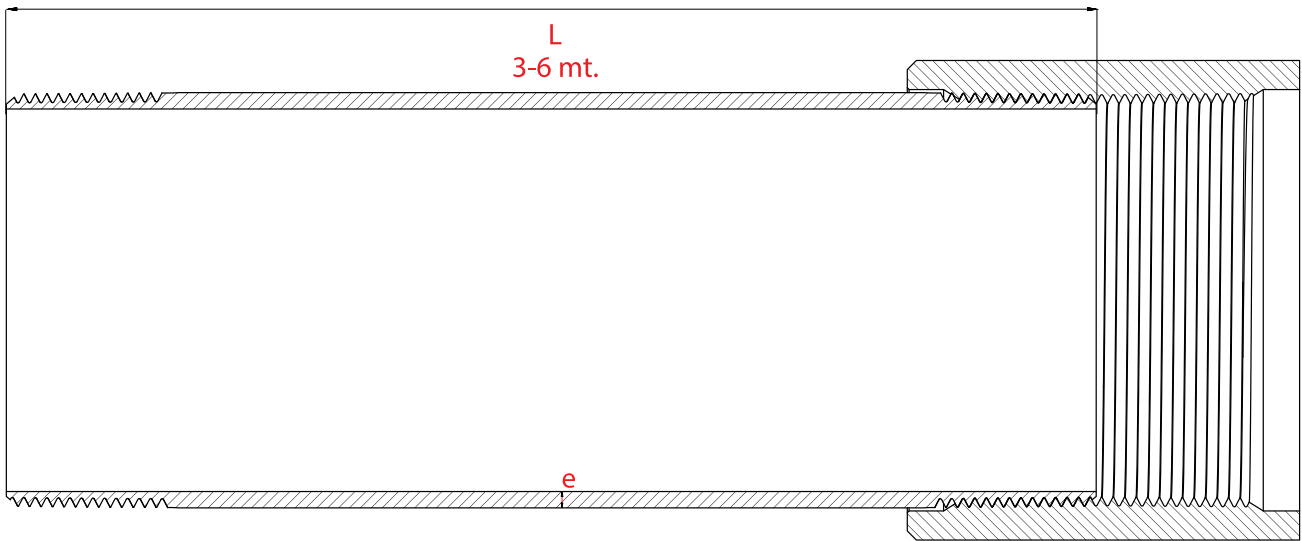
Diameter (inch)	Diameter (mm)	Wall Thickness	Upsetted Wall Thickness	Package Pieces
1 1/4"	42,4	3,25mm	5,50mm	44
1 1/2"	48,3	3,25mm	5,50mm	37
2"	60,3	3,65mm	6,00mm	24
2 1/2"	76,1	3,65mm	6,00mm	19
3"	88,9	4,05mm	6,50mm	19
4"	114,3	4,50mm <td 8,00mm	10	
5"	139,7	5,00mm	8,50mm	10
6 5/8"	168,3	5,00mm	9,00mm	10
8 5/8"	219,1	5,00mm	9,50mm	7



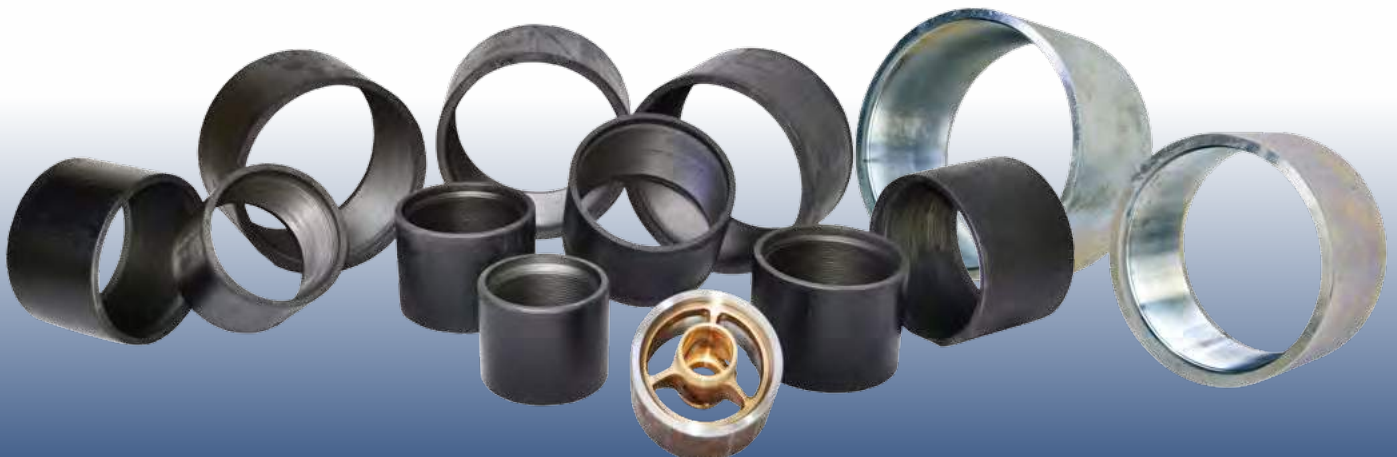
Line coding of pipes The line coding for different classes is given below.



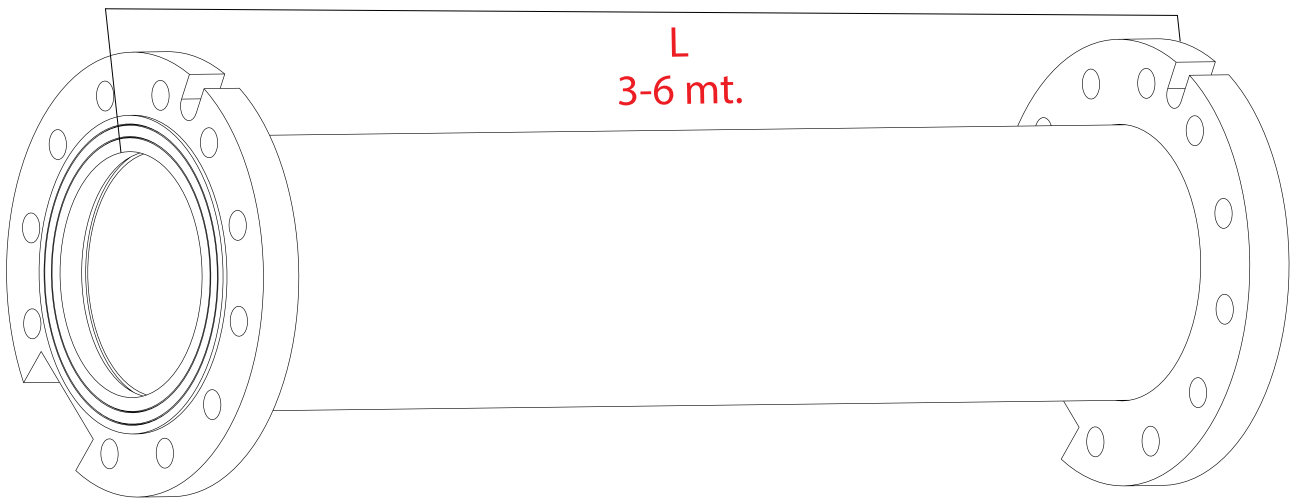
THREADED AND COUPLED COLUMN PIPES



- Turbine Pipe and Submersible Turbine Pipe
- Size 1¼" to 10"
- Oil Lube, Water Lube Water Flush
- Couplings have Manganese Phosphate Coating for anti galling.
- Material; ASTM A53 Grade B , EN 10255 , EN 10217, Galvanised, 316 SS , 304 SS
- All OEM specifications.
- Different manufacturing according to customer request.
- Inspection with API certificated gauges



FLANGED COLUMN PIPES



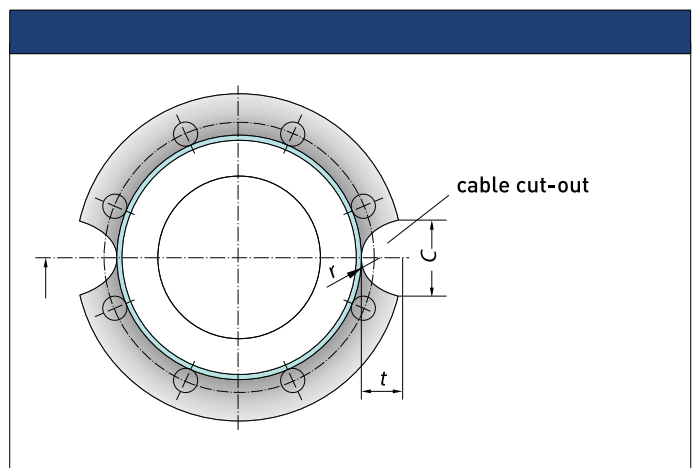
- Flanged column pipes with screws and gaskets are available in carbon steel without coating, coated with waterborne base paint or hot galvanized and stainless steel.
- Welding area inspection with Magnetic Particle Testing and Ultrasonic Testing

- Different design and manufacturing in different length is possible.
- Material; ASTM A53 Grade B , EN 10255 , EN 10217, Galvanised, 316 SS , 304 SS
- Galvanising under TS EN ISO 1461 international standart

Cable notches

Nominal diameter	DN	50	65	80	100	125	150	200
	PN	16	16	16	16	16	16	16
c	[mm]	48	48	48	55	65	75	60
r	[mm]	15	15	15	20	30	35	20
t	[mm]	30	30	30	30	30	35	35

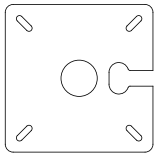
Flanges with 2 cable notches each on both sides, optionally staggered by 180° or 90°. Additional notches on request.



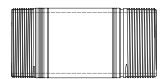
COLUMN PIPES EQUIPMENTS



WELL HEAD FLANGE



ADAPTOR



WELL HEAD ELBOW



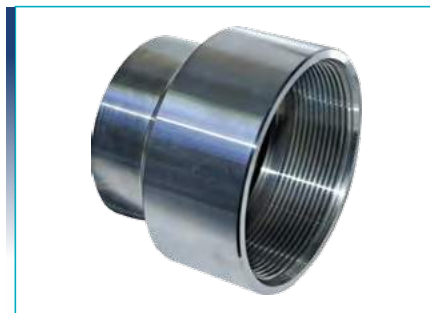
FLANGE ADAPTOR



COUPLINGS



REDUCERS



CIRCULAR HEAD SLIDE



Discharge heads are fabricated for specific requirements for new or existing installations. Sumpas can manufacture Type U, F, L, and T heads for vertical turbine installations. Submersible discharge heads are also manufactured to meet custom requirements. Base plates, sole plates, companion flanges, adaptors, reducers couplings and motor stands are also commonly furnished along with specified discharge heads.

STEEL CASING PIPE API 5CT

Sumpas supplies;

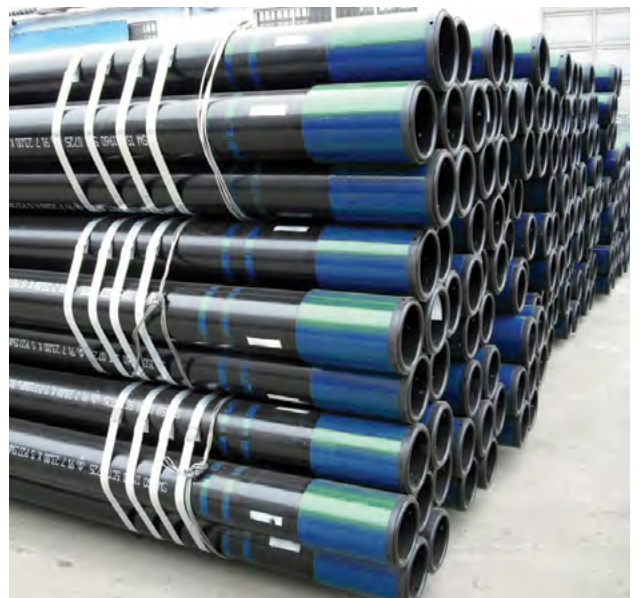
- API 5CT Casing Pipe in J55, K55, N80, P110 BTC and Premium Connection
- Range of Sizes: 4 1/2" to 20"
- STC (Short Thread Coupled), BTC (Buttress Thread Coupled), LTC (Long Thread Coupled)
- EUE (External Upset End) NUE (Non Upset End)
- Length: R2, R3



OCTG TUBING API 5CT

Sumpas supplies;

- Tubing range of Sizes: 1.05", 1.315", 1.66", 1.9", 2 3/8", 3 1/2" and 4 1/2"
- Ends Type: BTC, UN, EUE, Premium ends that could completely replace the tubing premium connection of Vam, Tenaris Hunting, TSH etc.
- Length of the Tubing in API 5CT Spec: R2, R3
- OCTG, Tubing in API 5CT Grade J55/K55, N80, C90, C95, P110, Ends EUE & Premium ends





API 5DP DRILL PIPE

Sumpas supplies;

- Drill Pipe manufactured strictly according to API 5DP standard
- Upsetting the end of pipe body
- Friction Welding
- Friction Welding area heat treatment
- Inspection with API certificated gauges
- NDT Inspection (Magnetic Particle Testing and Ultrasonic Testing)
- Pipe body material: High quality alloy seamless pipe of E75
- Cold Root Rolling to thread is available
- Phosphorization or copper plating to threads
- Repairing drill pipe in our facility.
- Diameters from 2 3/8" to 6 5/8"
- Grade DZ50, E75, R780, X95, G105, S135





DRILL ROD AND CASING

Sumpaş manufactures its drill rods and casings by using premium quality cold drawn seamless tubes and best tools available in the market for diamond core drilling. These alloy steel tubes are imported as raw material to ensure excellent tensile strength & elongation characteristics and manufactured in the Sumpaş's high technology CNC machines.

By considering both the customers' requirements and the latest developments in the technology.

Sumpaş manufacture upseted drill rods. Tubes with larger internal diameter are used and wall thickness of both ends is increased with upsetting for threading purposes.



The final product is significantly lighter and as a result depth capacities of drill rigs are increased up to 30%. As a result of heat treatment process, more durable and resistant threads are formed.

NQ-HQ-PQ SERIES

TYPE	OUTSIDE DIA. (mm)	INSIDE DIA. (mm)	Wall thickness (mm)	LENGTH (mt.)
NQ	69,9	60,3	5	3
HQ	88,9	77,8	5,5	3
PQ	114,3	103,2	5,5	3



Zero-ring operating manual

Step 1

U HEAD SLIDE

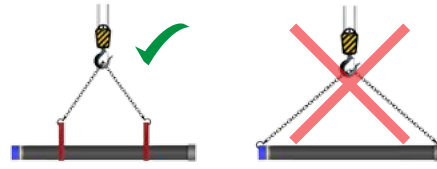


CIRCULAR HEAD SLIDE



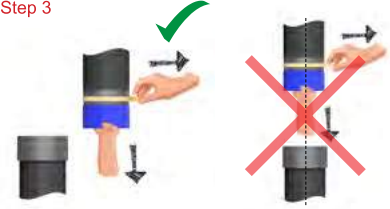
Start installing by leveling well head.
Note: Up to 150 meters installing can use U Head Slide, after 150 meters circular head slide prefer.
 When you use U head slide, couplings out of round because of the weight.

Step 2



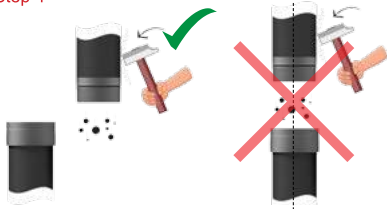
During carrying the column pipes , not use hook etc. Definitely.Carry by centring thecolumn pipe.Be carefull not to damage thread area.

Step 3



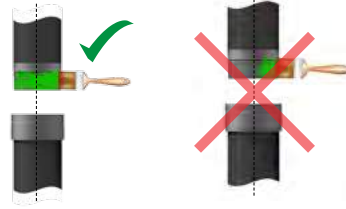
Don't take out thread plastic caps on well head.As shown , take out in free space.

Step 4



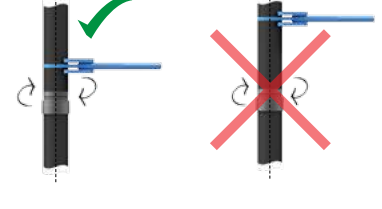
Use hammer on column pipe body to empty flash, swarf etc. Definitely don't maket his on well head.

Step 5



After checking thread cleanliness, use Grease on both thread area and O-ring area.(Don't use paint , resin etc. Otherwise you can not disassemble.)

Step 6



After implanting pin side to box side, screw3-4 turns by hand.Use pipe wrench on near the threaded area. Not prefer body area in case threads not exposure to swanky.

Because of the tightness property , water is always inside of the pipes.Because of that, take due precautions in winter season while disassembling.

Noncompliance with procedural rules shown above, potential damages during the carrying,installing and disassembling, we are not responsible.

QUALITY CERTIFICATES

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İzmir Office: Hurdacılar Sit. 1422 Sk. No:20 Doğanlar/Bornova/İzmir/TURKEY
Phone: +90 444 4 786 Fax: +90 332 345 44 70 Mobile: +90 530 433 18 96 mail: info@sumpas.com.tr



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