

***STEP-KO***  
***PRODUCTS***

# ***Monolithic Isolation Joints*** ***&*** ***Special Pipeline accessories***







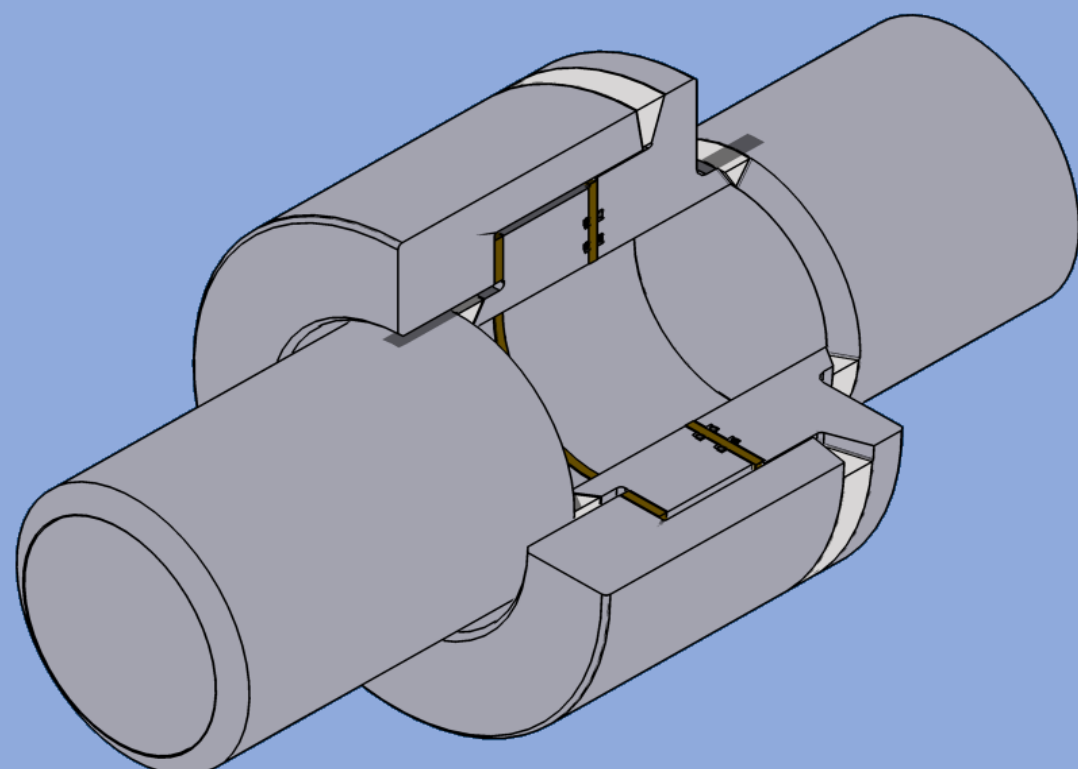
## ***ERAM Technologies Detail***

ERAM in Latin means I was, hence the essence of working matter and transforming it into technology to serve man and the environment. After over 30 years of experience in designing technology components in the Oil & Gas industry, the choice of creating a new company to provide design and construction expertise for the proposed products.



## ***ERAM Technologies Team***

Our team is made up of professional people that are always capable to assist and give Customers the best solution for their needs. A single partner able to assist you in a timely manner and that never leaves you alone, to which you can contact for any needs. We are Italian and the passion we put into our job is the same we have inside of our heart.





## ***Passion to our job and to the customer always comes first***

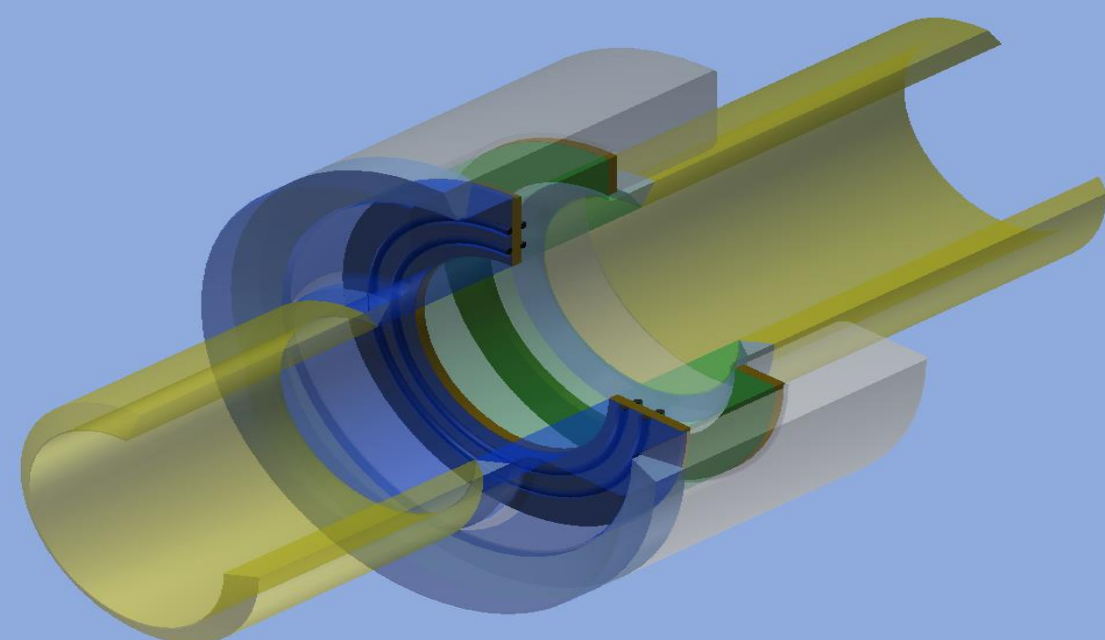
ERAM Technologies rooted strongly in the Oil & Gas and petrochemical sector, produce and supply Monolithic Isolation Joints for both onshore and offshore projects. Saving in the overall cost of corrosion control system is just one of the benefits of using Monolithic Isolation Joints.



Monolithic Isolation Joints are used worldwide for permanently controlling the flow of electrical currents or electrically isolating pipe sections in pipes and piping systems. Effective management of cathodic protection programs results from the use of these highly reliable substitutes for flange isolating gasket kits system.

Other benefits include protection against earthing currents at domestic and industrial premises, isolation of pipeline cathodic protection system and to ensure that cathodic protection or stray currents do not cause increased corrosion.

**ERAM Technologies** Monolithic Isolation Joints are designed to meet and satisfy very high pressure services up to 20,000 psi. Upon request, we can supply Monolithic Isolation Joints according to Project specification.



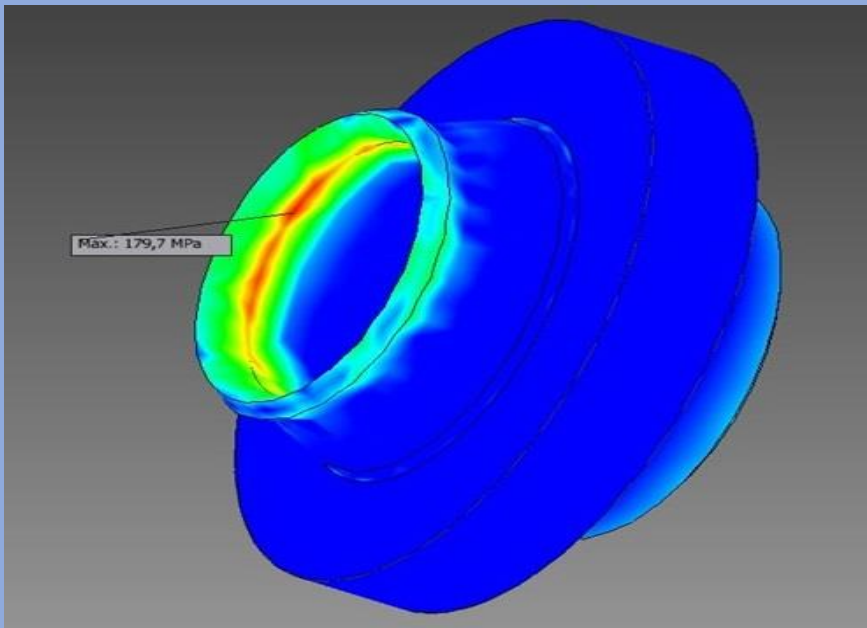


## Design and Fabrication of Pipelines Components



**ERAM Technologies** supply Monolithic Isolation Joints (MIJ) in Carbon Steel, Stainless Steel, Duplex and Super Duplex Stainless Steel, for various services Fluid, range of temperatures and pressures, suitable for above and underground Installation in full compliance to NACE RP 02-86 for Cathodic Protection Pipeline.

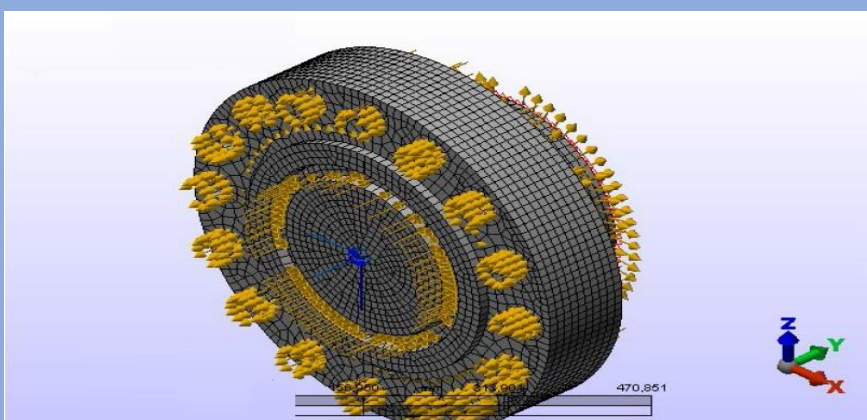
Our products (MIJ) are designed according with ASME B31 series, ASME VIII Div. I/II, EN 13445, and other Statuary Codes. Our products are tested into laboratories as per our customers' project Specification requests.



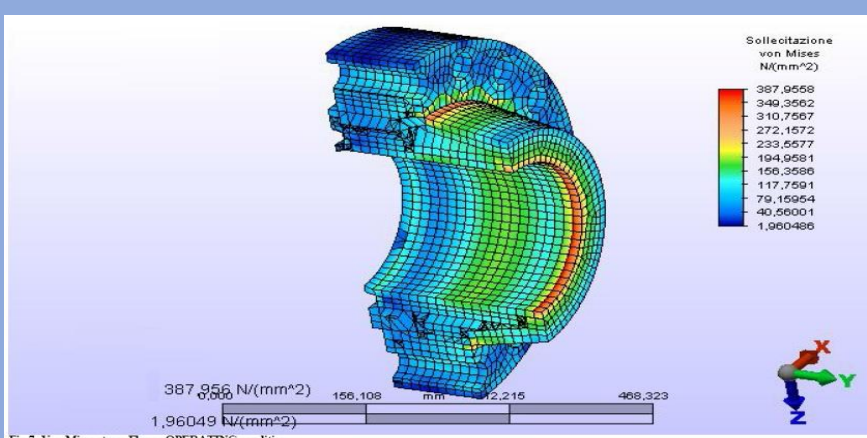
**ERAM Technologies** also supply Anchor Flanges type Welding Neck (WN) e Slip On (SO), Socket Weld (SW), and special shape as per customers drawings.

We supply also Swivel Flanges and Spectacle Blind (Disk and Spacer) for piping system.

Our Anchor Flanges, Swivel Flanges and Spectacle blinds are Designed according ASME VIII Div. I/II available into all ANSI and API classe; Carbon Steel, Stainless Steel, Duplex, Super Duplex Stainless Steel, and other available materials.



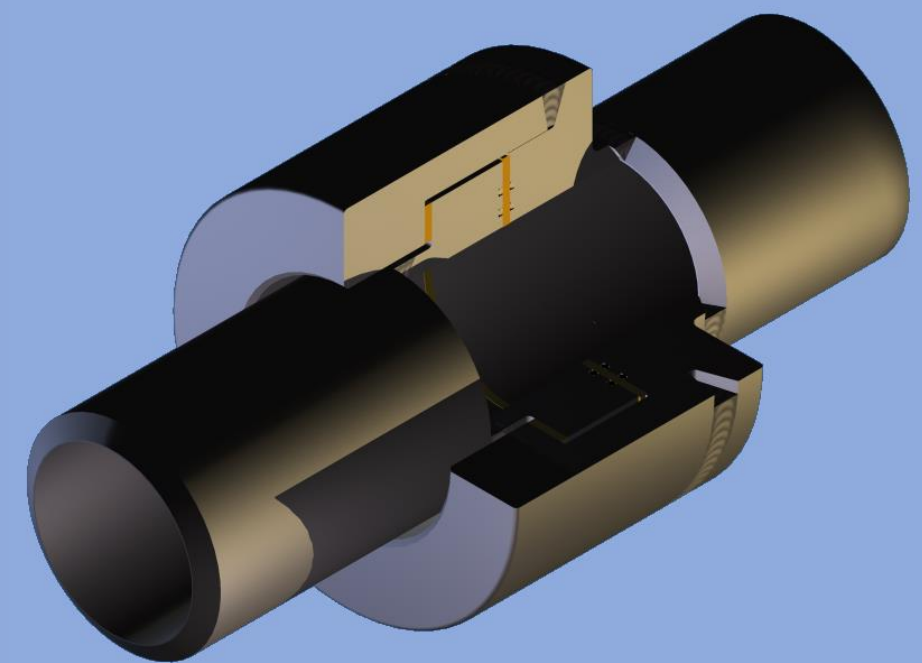
**ERAM Technologies** is able to supply Special Pipeline accessories, and we are in progress to design new cutting-edge solutions to protect the environment





## ***Advantages of MIJs vs. Flange Isolating Gasket Kits***

Worldwide people consider flange isolating gasket kits more cost efficient than Monolithic Isolation Joints. Infact flange isolating gasket kits are cheaper then Monolithic Isolation Joints but only when Companies purchase them without considering all the variables. Materials replacement, installation on field, inspection on field and periodic maintenance. Considering the replacement of various components of the kit since they will deteriorated in short time, the Monolithic Isolation Joint is the most convenient and effective product for the cathodic protection of the pipelines.



## ***Advantages & Benefits***

- No loss of integrity
- Maintenance-free
- Extreme bending and torsional resistance
- Earthquake resistant
- Prefabricated, tested in factory & ready to install (do not need field assembly)
- Fully welded component
- Coated both internally and externally
- No labor intensive required as for flange isolating gasket Kits



### STANDARD DESIGN CONSTRUCTION

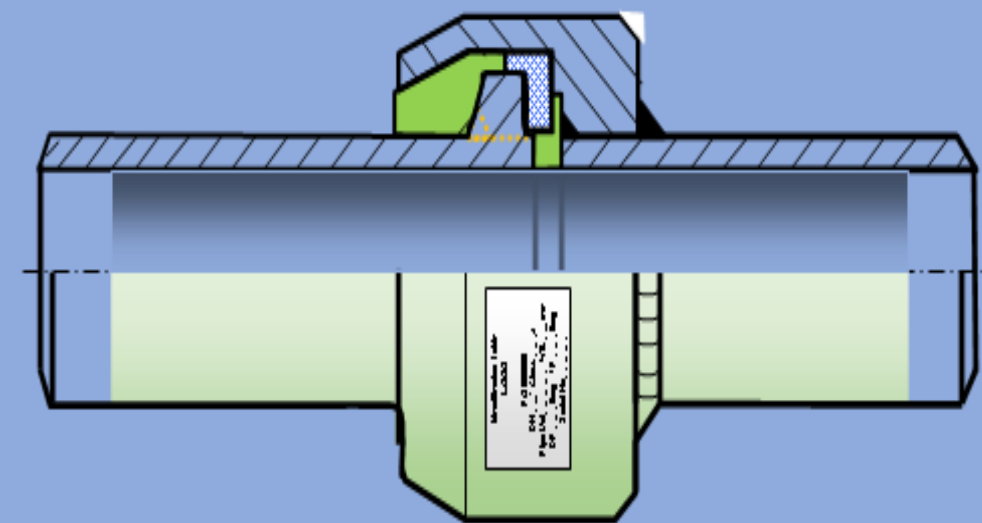
Class 150				Class 300				Class 600			
DN (inch)	Wtk (mm)	Length (mm)	Type	DN (inch)	Wtk (mm)	Length (mm)	Type	DN (inch)	Wtk (mm)	Length (mm)	Type
1"	3,38	250	FW	1"	3,38	250	FW	1"	3,38	250	FW
2"	3,91	300	FW	2"	3,91	350	FW	2"	5,54	350	FW
3"	4,78	400	FW	3"	5,49	500	FW	3"	5,49	500	FW
4"	4,78	400	FW	4"	6,02	500	FW	4"	6,02	500	FW
6"	5,56	500	FW	6"	7,11	600	SW (BW)	6"	7,11	600	SW (BW)
8"	6,35	500	FW	8"	8,18	600	SW (BW)	8"	8,18	600	SW (BW)
10"	6,35	500	SW (BW)	10"	8,74	600	SW (BW)	10"	9,27	600	SW (BW)
12"	6,35	500	SW (BW)	12"	9,52	700	SW (BW)	12"	9,52	700	SW (BW)
14"	7,92	500	SW (BW)	14"	9,52	700	SW (BW)	14"	9,52	700	SW (BW)
16"	7,92	600	SW (BW)	16"	10,31	800	SW (BW)	16"	10,31	800	SW (BW)
18"	7,92	700	SW (BW)	18"	11,91	800	SW (BW)	18"	11,91	800	SW (BW)
20"	7,92	800	SW (BW)	20"	11,91	800	SW (BW)	20"	11,91	800	SW (BW)
24"	9,52	800	SW (BW)	24"	12,7	800	SW (BW)	24"	14,27	800	SW (BW)
30"	9,52	1000	SW (BW)	30"	15,88	1000	SW (BW)	30"	15,88	1000	SW (BW)
36"	9,52	1100	SW (BW)	36"	19,05	1200	SW (BW)	36"	19,05	1200	SW (BW)
40"	9,52	1100	SW (BW)	40"	20,62	1200	SW (BW)	40"	20,62	1200	SW (BW)
42"	9,52	1100	SW (BW)	42"	20,62	1200	SW (BW)	42"	20,62	1200	SW (BW)
48"	12,7	1200	SW (BW)	48"	21,3	1300	SW (BW)	48"	21,3	1300	SW (BW)
56"	14,3	1200	SW (BW)	56"	25,4	1400	SW (BW)	56"	28,6	1400	SW (BW)

*Note: Butt Weld Design Construction will be used only in case of X-ray requirements*

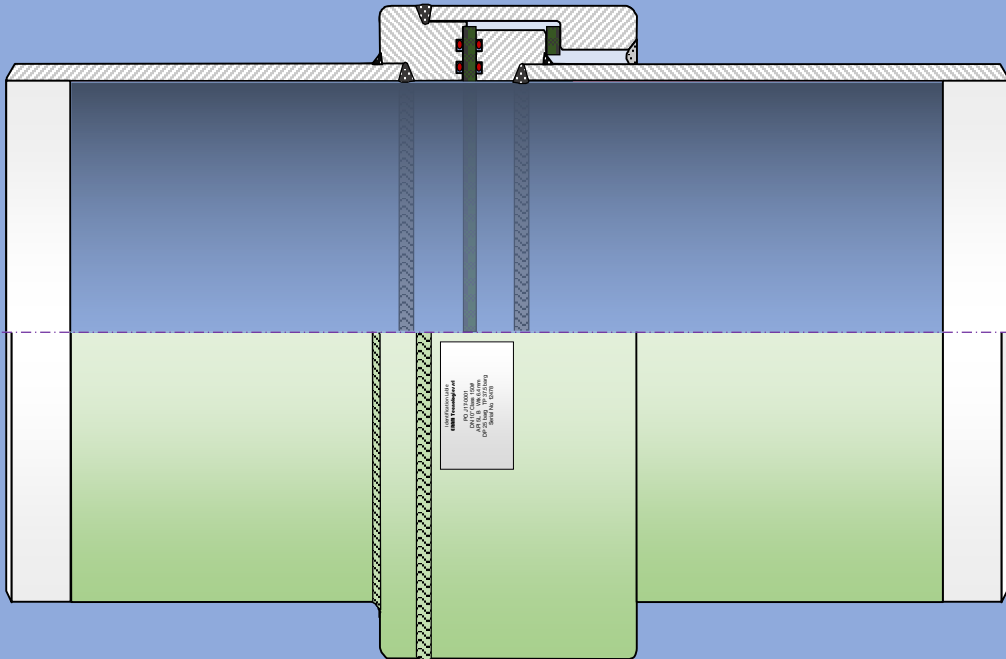
### Basic Parameters of Monolithic Isolation Joints

Certification	EN 10204 3.1 ( EN 10204 3.2 if requested )
Design Code	ASME VIII D.I - ANSI B 31.8/4/3
Design Factor	0,2 to 0.72
Pipe Pups (ISO3183 - API 5L)	Carbon Steel All Grades + Low Alloy & Alloy Steel + Duplex & Super Duplex
Body Parts	ASTM / ASME / UNS / EN Materials
Double "OR" Gasket (BW & SW) Flat Gasket (FW)	ERAM can use any kind of "O"Ring or Flat Gasket depending on project for SOUR - NON-SOUR - TOXIC environment requirements and special applications (NBR - FKM - FEP-O-SEAL - ENERSEAL - KALREZ).
FLUIDS	Gas, Hydrocarbons, Oil, Chemical Fluids, Water
SERVICES	SOUR / NON SOUR /TOXIC /LETHAL
Insulator	Polycarbonate or NEMA G10/G11 - ASTM D709 –Class H
Resin Filler	Cold Cured Epoxy
Sealant	Silicon Neutral Low Module
Electric Insulation Resistance	>200 MΩ
Dielectric Strenght Test	5 to max 12 kV (AC) / 50 Hz (1-5 min)
Hydrostatic Test	1,5 times Design Pressure (or as per Customer Specification)
Pneumatic Air Test	10 bar 10 Min., if required
Hydro-Fatigue Test (barg x cycles)	5 Cycles at 80% TP (or as per Customer Specification), if required
Internal / External Coating	Epoxyphenolic or Amine Cure Epoxy Resin. Depending on Project Specification, we can apply any required painting system
NDE Pup Bevels	100% MT/UT - ASME V - ASME VIII
NDE W3 Closure Weld	100% MT/UT - ASME V - ASME VIII
NDE W1-W2 Butt Welds	100% MT/UT/RX- ASME V - ASME VIII
Max Allowable Loads	up to 95% SMYS, if required
Additional tests available upon request	HIC Test - SSC Test - Vacuum Test - 3% saline immersion Test - Pull Off Test - Adhesion Test
PED Certification	Upon Request
ATEX CE Certification	Upon Request

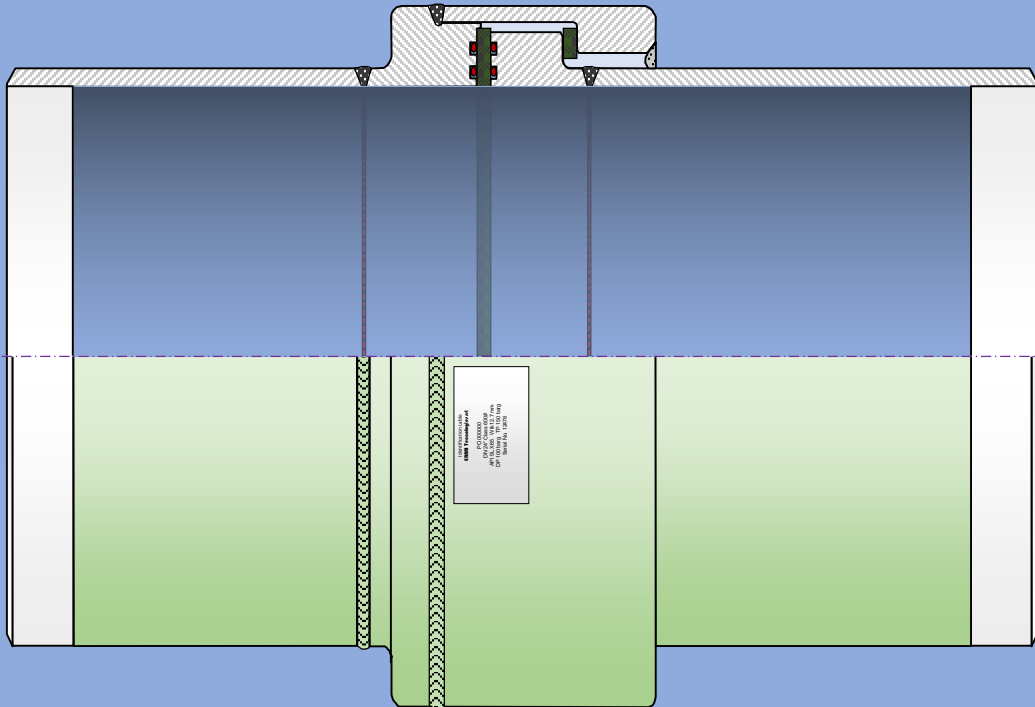
Type FW (Fillet Weld)



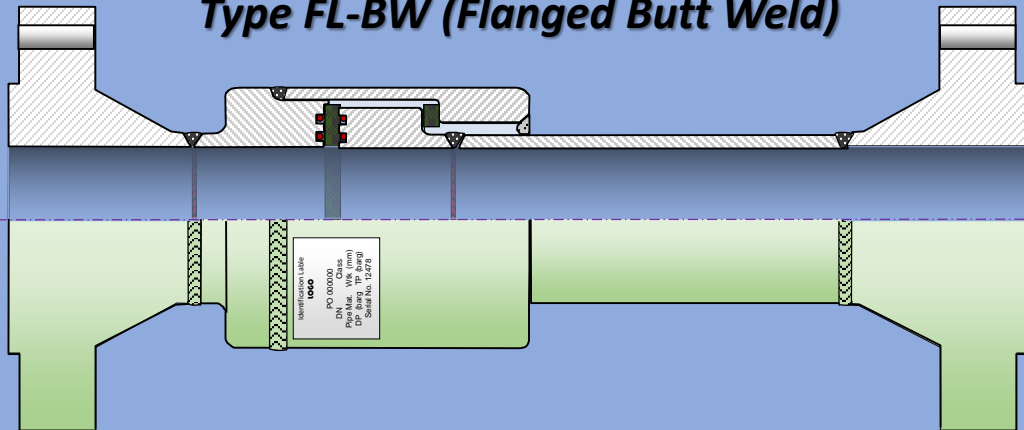
Type SW (Socket Weld)



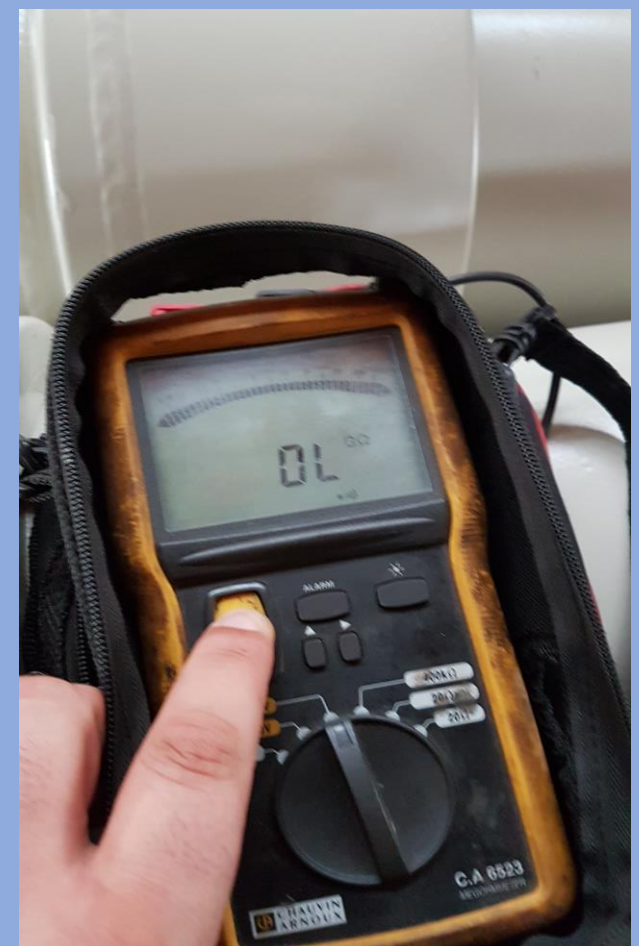
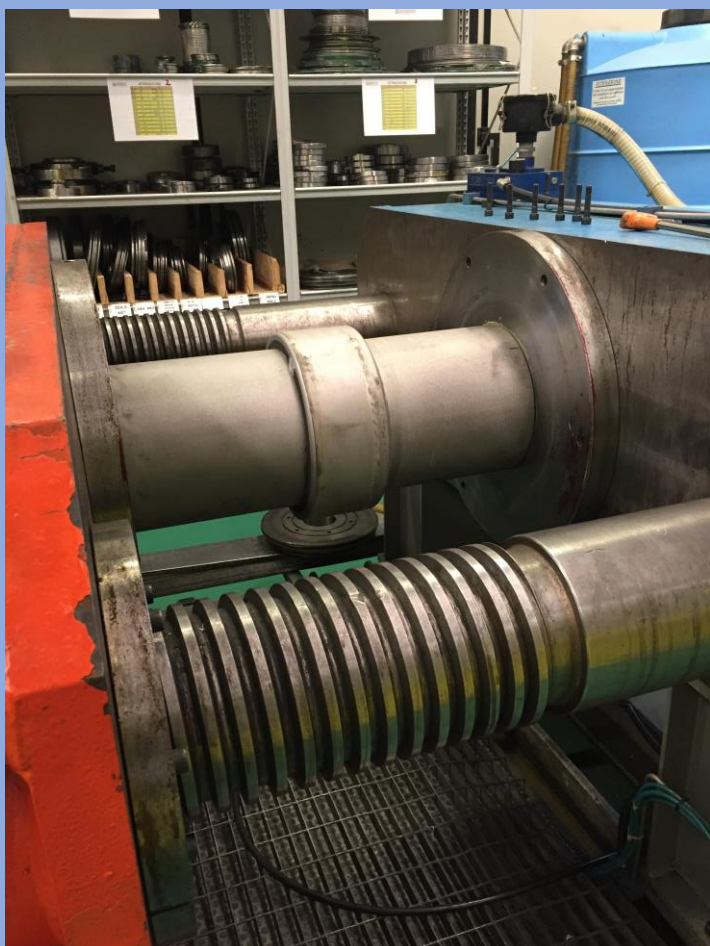
Type BW (Butt Weld)



Type FL-BW (Flanged Butt Weld)









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