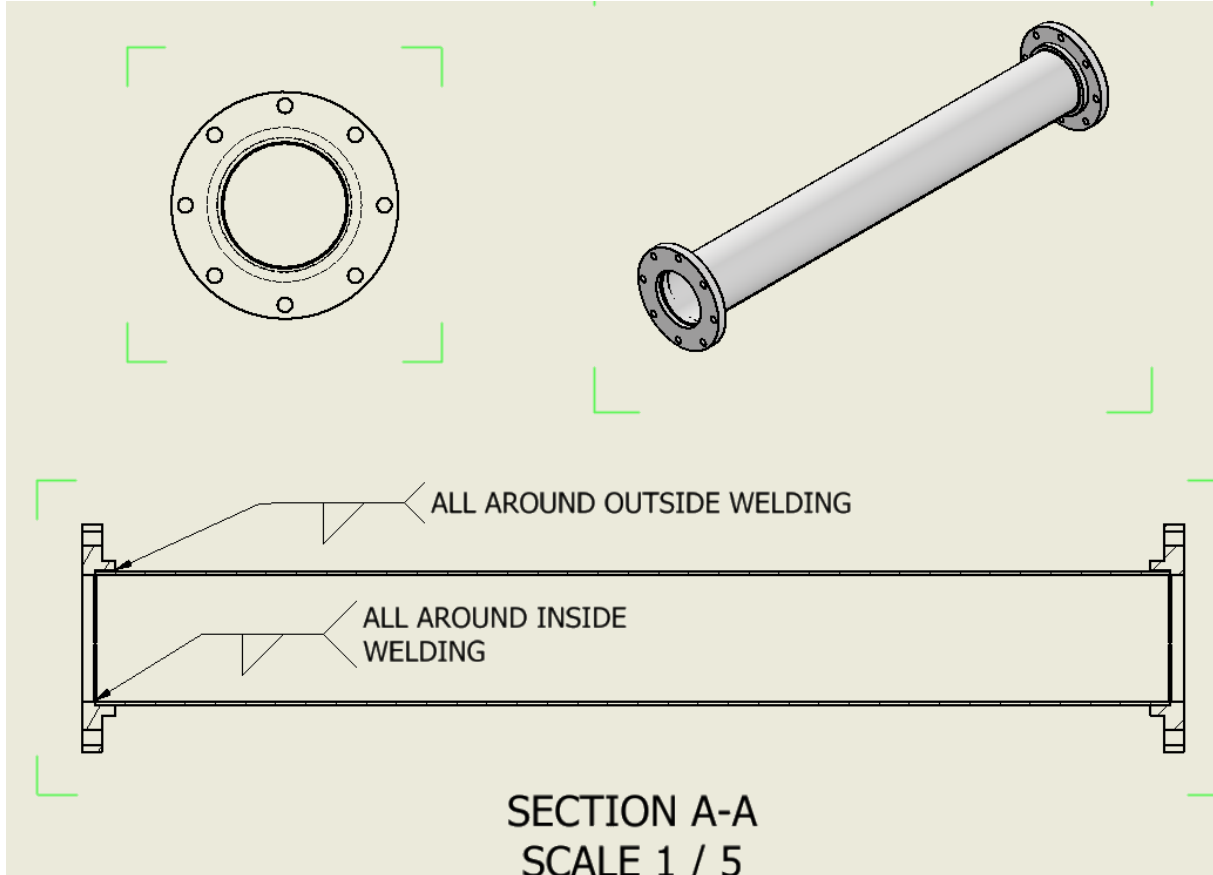


BOTTOM LOADING ARM REL



For the productions of PETRAC and KTM, quality, reliability and the safety is the biggest priority among all aspects. In this purpose the welding and corrosion controls have been made after the manufacturing and welding stage is executed. Experimental and numerical (FEA-Finite Element Analysis) has been developed and tested for pressure testing of the weld on the product. The properties of the welding are given down below.

Document	ID	Type	Length	UoM	Mass	UoM	Area	UoM	Volume	UoM
Bottom Loading Arm Reel										
	Outside Welding Top	Cosmetic	315.73	mm	1.104	kg	1.29E+03	mm ²	4.07E+05	mm ³
	Outside Welding Bottom	Cosmetic	315.73	mm	1.104	kg	1.29E+03	mm ²	4.07E+05	mm ³
	Inside Welding Top	Cosmetic	295.31	mm	1.033	kg	1.29E+03	mm ²	3.81E+05	mm ³
	Inside Welding Bottom	Cosmetic	295.31	mm	1.033	kg	1.29E+03	mm ²	3.81E+05	mm ³



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For the experimental setup, air has been given up to 7 bars (700 000 Pa) working pressure to see the behavior of the product. For 400, 800 and 1200mm ranges.





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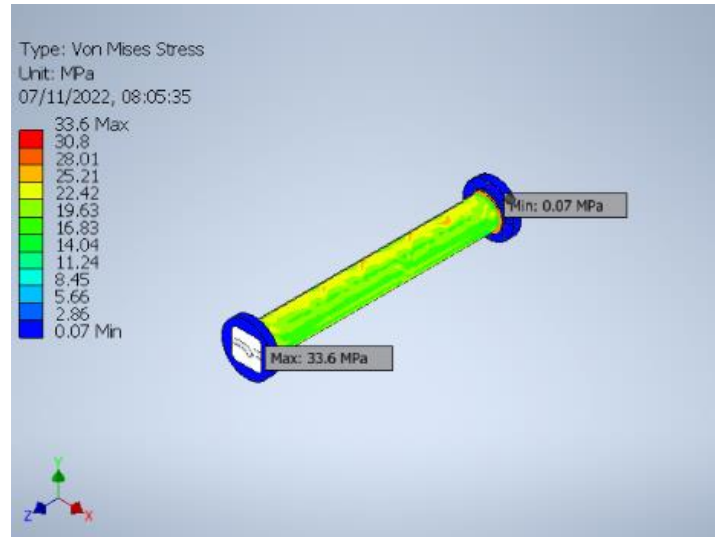
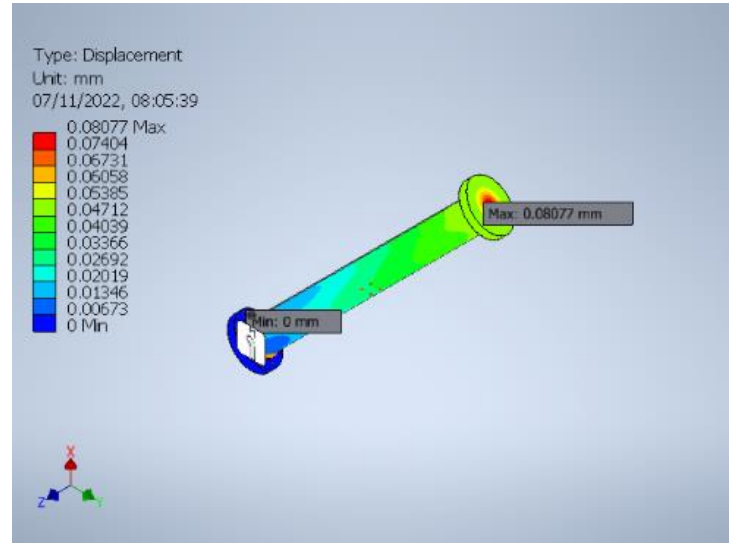
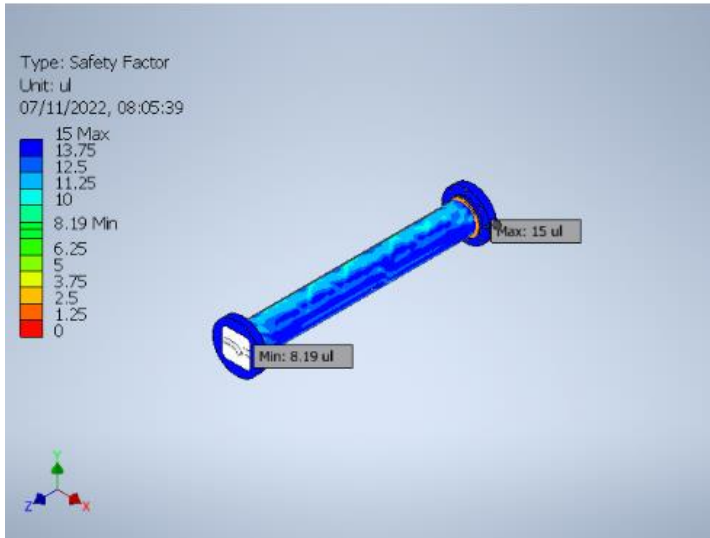


Samsung Quad Camera

تم الالتقاط بواسطة
Galaxy A51 الخاص بي



For the numerical setup Autodesk Inventor software has been used for CAD Modal and the FEA (Finite Element Analysis). The experimental pressure has been given as 15 bars (two times bigger than the experimental) too see the safety for bigger pressures.



Factor of safety come as 8.19, according to the regulations it needs to be more than 4.5 for the oil and gas industry. The displacement and Von Mises stresses also have been generated. The extended report will be given to your company as an attachment.



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According to the experimental and numerical test and the welding and corrosion checks, **the product is more than safe to use and the welding process is successful.**

Yours sincerely

Ahmet CANBULBUL

OWNER

KTM/PETRAC

MSc/ Yuksek Muhendis

Mert TAS

PARTNER KTM/PETRAC

