



Studio NALIN

Engineering, Quality & Marketing

COMPANY PROFILE

Issue January 2023

Ing Rinaldo NALIN

Via 24 Maggio, 101 – 31021 MOGLIANO VENETO (TV) Italy

Ph.: +39 041 5905400 Fax: +39 041 8871455

Mail info@studio-nalin.com – URL www.studio-nalin.com

c.f. NLN RLD53S08L736M – p. IVA 04561050263



Studio NALIN *Engineering, Quality & Marketing*

1. ABOUT US

Our Engineering Office was established officially in the year 2012, by Rinaldo Nalin, Registered Professional Mechanical Engineer, who starts his experience in the Oil & Gas Market in the 1979 in the best Manufacturing Companies of Pressure Vessels and Heat Exchangers in Italy.

He acquired his skill both in the Technical Departments (*he was appointed as Technical Manager for more than 25 years*) and in the Technical-Commercial Departments.

He completed his experience in the Quality Control (*he has been Level III ASME and Qualified Inspector for EXXON since 1992*)

Starting from the '80s we have designed a lot of Pressure Vessels, Columns, Reactors, Heat Exchangers, Piping and Steel Structures, both mechanical and process

Our Office is located in the Northeast of Italy, in Mogliano Veneto, at about 10 km from Venice downtown and Venice Marco Polo Airport

Actually the Office takes advantage of the collaboration of skilled personnel both for the design and for the drawing of Equipment

With 2 engineers and 3 designers, we can handle multiple simultaneous designs or projects. Because of our broad national and international reach, we are familiar with both the preferences and the specifications of many large companies.

We are specialized in the global design for the Oil & Gas Field:

- Process Design in the Oil&Gas sector
- Mechanical and FEA Calculation for Pressure Vessels and Heat Exchangers
- Thermal Calculation of Heat Exchangers
- CFD Computational Fluid Dynamics
- Piping Design and Stress Analysis
- Risk Analysis for PED Dossier of Equipment
- Civil and Industrial Engineering
- Marine Design (Racing & Cruising Sailing Boats)

We are also specialized and qualified for Inspection and Expediting Works on Static Pressure Equipment, Piping, Valves, Electrical Equipment. We can offer also consultancy services on Welding Qualifications, Quality Documentation and Control and Production Quality & Development.

(see Section 5. INSPECTION & EXPEDITING SERVICE on sheet 8/23)



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2. MAIN CALCULATION CODES

PRESSURE VESSELS & BOILERS:

- BPVC ASME Sect. VIII Div. 1 & 2
- BPVC ASME Sect. I
- EN 13445
- GOST 34347-2017
- PD 5500
- AD-2000
- TRD
- CODAP Div. 1 & 2
- IBR Indian Code

MOUNDED HORIZONTAL VESSEL FOR PRESSURIZED STORAGE OF LPG

- EEUMA 190

STORAGE TANKS:

- API 620 - API 650 - API 653 - API 2000

SHELL & TUBE HEAT EXCHANGERS:

- TEMA
- BPVC ASME Sect. VIII Div. 1 & 2
- HEI
- API 660
- EN 13445 - PD5500 - AD-2000

FIRED HEATERS:

- API 560, API 561 & API 530
- API 12k

AIR COOLERS:

- API 661

PIPING:

- EN 13480 - ANSI B31.1 - ANSI B31.3

FLARE SYSTEMS UNITS

GAS DEHYDRATION AND SWEETENINGS PACKAGES

CHEMICAL INJECTION PACKAGES



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3. MAIN AVAILABLE SOFTWARE

Process Design:

- ASPENTECH HYSYS
- SimSci PRO/II

Mechanical Design:

- PV Elite
- AutoPipe Vessel CONNECT Edition
- COADE Tank

Heat Exchangers, Fired Heaters, Plate Fin Exchangers, Air Coolers Thermal Calc.:

- HTRI Xchanger Suite
- ASPENTECH Exchanger Design and Rating

Computational Fluid Dynamics CFD

- Autodesk CFD
- PIPESIM (Piping Network Steady-state Multiphase Flow Simulator)

FEA Analysis:

- ANSYS Workbench
- Autodesk Simulation Mechanical
- PRO-SAP RY2016
- AutoFEM
- Strand7
- LISA 8.0

Piping Stress Analysis:

- BENTLEY Autopipe
- COADE Caesar II

Flare Systems

- ASPEN Flare System Analyzer
- FlareSim



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Gas Treatment Packages

- Aspen HYSYS

Drawings 2D & 3D:

- AUTODESK AutoCAD
- CADWorx Equipment-Plant-P&I
- SolidWorks
- Modelling RHINOCEROS 5
- TEKLA Structures 21

Boat & Sailing:

- FREEship Hull Design
- DELFTShip
- SMAR Azure



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4. END USERS REFERENCES for Engineering & Service

- ADGAS Das Island Project
- AKER SOLUTIONS
- AMEC-FOSTER WHEELER
- ATB RIVA CALZONI → *Approved Engineering and Service Supplier*
- BECHTEL
- BURREN ENERGY PLC
- CB&I LUMMUS → *Approved Engineering and Service Supplier*
- CPECC China
- ENAR
- ENI → *Approved Engineering and Service Supplier*
- FJORDS PROCESSING
- GAZPROM → *Approved Engineering and Service Supplier*
- GREENMETHANE
- HEURTEY PETROCHEM
- INEOS GROUP
- JGC
- KBR → *Approved Engineering and Service Supplier*
- KNPC
- LTHE
- LUKOIL → *Approved Engineering and Service Supplier*
- MAIRE TECNIMONT → *Approved Engineering and Service Supplier E2Y*
- MMHE Malaysia → *Approved Engineering and Service Supplier*
- MW KELLOGG
- NIOC
- ORPIC Oman → *Approved Engineering and Service Supplier*
- PETROFAC → *Approved Engineering and Service Supplier*
- ROSNEFT → *Approved Engineering and Service Supplier*
- SAIPEM
- SAUDI ARAMCO
- SINOPEC
- SOCAR
- SONATRACH → *Approved Engineering and Service Supplier*
- STATOIL
- SULZER
- TAKREER
- TECHNIP
- TECNICAS REUNIDAS → *Approved Engineering and Service Supplier*



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- TOTAL E&P → *Approved Engineering and Service Supplier*
- TOYO ENG
- VERSALIS

5. INSPECTION & EXPEDITING SERVICE

We offer Inspection and Expediting services especially with regard to Pressure Static Equipment, complete Plants, Valves, Piping, Electromechanical machinery, air conditioning and refrigeration, steel structures.

We are Authorized Technical Specialist for Inspection and Expediting for Pressure Vessels, Heat Exchangers, Piping and Electrical Equipment for INTERTEK Group, ACES Global Quality Services, A&M Inspections, APPLUS+, GE General Electric, TUV NORD, TUV SUD, RINA

We have been qualified and we actually work with the following main Customers

(List not limited to the Customers indicated below)

- ALSTOM POWER SERVICE SaS Forgings for Nuclear Equipment @ RTD Forge Srl
- AMEC FW Expansion Vessels @MAVI Srl
- BORSIG GmbH No. 200 Headers @TUBITAL Srl and @ CMP SpA
- Heat Exchangers @TUBITAL Srl and @ CMP SpA
- Shells @TUBITAL Srl and @ CMP SpA
- BRITISH COLUMBIA HYDRO AND POWER AUTHORITY Forgings for Power Plant
- CB&I INDIA-ADNOC Project Off-gas compressor motors @NIDEC-ASI SpA
- CCC Oman No. 200 off valves various size @VALVITALIA-VITAS SpA
- CF INDUSTRIES NITROGEN LLC High Temperature Shift Converter
- CHEVRON SOUTH AFRICA PTY. LTD Dissolved air flotation (DAF) Plant @ISIA Srl
- DOW CHEMICAL COMPANY Piping on compressor skid unit @GEA REFRIGERATION
- ENTRADE S.A. Valves 4" – 2500# for Power Plant @GREEN CONTROL Srl
- GE Various locations
- IBERDROLA Baltic Eagle Offshore Windfarm – Dry Coolers @ LUVE Alonte
- JOHN ZINK HC Various Pressure Vessels @ZATOM Srl
- Burners @SICA SpA
- Aircraft Warning Lights Flare Systems @CALZAVARA IMPIANTI SpA
- LPG skid for Thermal Oxidizer @TNC Tecnoconsulting
- Control Panel for LPG skid @TNC Tecnoconsulting
- UCP System Cabinet for Flares @TNC Tecnoconsulting
- Refractory Materials @CREFIN Srl
- LTHE No. 100 off 3-Phase Induction Motors @ NIDEC ASI SpA
- LEITNER ROPEWAYS Steel Structure for various Cableways
- MAN AG - Axial Compressor complete Inspection for KALLO BOREALIS PROJECT @ DE PRETTO INDUSTRIES
- MAN AG - Skid Assembly Compressor Inspection for PORTIA Project Belgium@ DE PRETTO INDUSTRIES
- MAN AG - Complete Inspection for Compressor for ADNOC Project@ DE PRETTO INDUSTRIES
- MAN AG - Inspection on compressor casing @ DRESSER



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- MITSUBISHI ELECTRIC KLIMATE TRANSPORT. SYSTEM Conditioning System Unit
• For Rail @ MITSUBISHI PD
- MITSUBISHI HITACHI POWER SYSTEMS Chlorine Dioxide Dosing System for
• Water Pre-Treatment @ISIA SpA
- NARGAN COMPANY E&C Reactors Feed Effluent Exchangers for Esfahan OIL Refining
Residue Hydro-Treating Unit @ FBM HUDSON and CIMOLAI SpA
- PETROFAC 3-Phase Induction Motors for Pumps @NIDEC-ASI SpA
- PETROJET Various E>lliptical and sphericals Head @ PADANA FONDI Srl
- 42 HEAT EXCHANGERS FOR SOPC @ RAVAGNAN Spa
- REVERIE POWER & AUTOMATION ENGINEERING LTD High voltage disconnectors @
COELME SpA
- SABIC PK-7104E Boiler @ MACCHI SOFINTER SpA
- SAMSUNG/BAPCO SIEMENS CEMS & OXYGEN ANALYSERS @ FSA Srl
- SULZER UK No. 20 off 3-Phase Induction Motors @ NIDEC ASI SpA
- TOTAL MOZAMBIQUE – LNG PR UNITS - GT ENCLOSURE VENTILATION FANS @ FERRARI
VENTILATORI SpA
- TOYO ENGINEERING CORPORATION No. 4 Adsorbent Drums and Tail
Gas Drum @CIVIDAC SpA
- W-MAAS Boat Impact Protection Forgings @ROESSL&DUSO SpA
- YARA Sluiskil R-306 Ammonia Converter @ OFFICINE LUIGI RESTA SpA



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6. MAIN PROJECTS IN THE LAST YEARS IN THE OIL & GAS FIELD

2022

2022 PLASTIC ENERGY UK

Complete Scrubber skid plant

Mechanical: PV Elite for ASME Sect.VIII Div. 1

2022 QATARGAS OPERATING COMPANY/TECNICAS REUNIDAS

Pig Launchers 6"x10" – 2500 #

Mechanical: Code ASME B34.1, Pressure and Seismic Calculation

2022 JSW USA

Piezometric tank 70 cu.m and support structure high 12 mt

Mechanical: according to AWWA 101 e 107 and ASCE 7., Structure and Tank calculations and Seismic Calculation, preparation of the construction drawings.

2022 ALFAWATER Srl

Water Filters

Mechanical: Bentley AutoPIPE Vessel for BPVC ASME Sect. VIII Div. 1, Pressure and Seismic Calculation, preparation of the construction drawings, consultancy for WPS / PQR preparation and construction

2022 3V Tech for French Customers

Glass Lined Reactor & Glass Lined Vessel

Mechanical: Bentley AutoPIPE Vessel for CODAP Ed. 2020, Wind and Seismic Calculation

Fatigue Analysis and Risk Analysis included

2021

2021 TECNIMONT EUROCHEM KINGISEPP AMMONIA and UREA COMPLEX

Filters

Mechanical: Bentley AutoPIPE Vessel for GOST 34347-2017, Wind and Sismic Calculation and **Fatigue Analysis** according to BPVC ASME with ANSYS Workbench Software

2021 TECNIMONT AMUR GAS CHEMICAL COMPLEX LLC

Coalescers

Mechanical: Bentley AutoPIPE Vessel for GOST 34347-2017, Wind and Sismic Calculation

2021 TECNIMONT AMUR GAS CHEMICAL COMPLEX LLC

Reactor for the catalytic decomposition of nitrous oxide

Mechanical: Bentley AutoPIPE Vessel for EN 13445-2017, Wind and Sismic Calculation

Risk Analysis included

2020

2020 3V Tech - French Customers

Glass Lined Reactor & Glass Lined Vessel

Mechanical: Bentley AutoPIPE Vessel for CODAP Ed. 2015 Revision 07/18, Wind and Sismic Calculation

Fatigue Analysis and Risk Analysis included

2019



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2019 3V Tech - Various French Customers

[Glass Lined Reactors](#)

Mechanical: Bentley AutoPIPE Vessel for CODAP Ed. 2015 Revision 07/18, Wind and Sismic Calculation

Fatigue Analysis and Risk Analysis included

2019 Biomass Plant, Italy

[Process and mechanical Calculations – Heat Exchanger](#)

Mechanical: PV Elite for EN 13445 pressure calculations

Thermal Calculations: AspenONE AEDR 9.0

2018

2018 Nueva Refineria Talara, Peru'

[Reformers vessels and columns](#)

Mechanical: PV Elite for ASME Sect.VIII Div. 1 Ed. 2017

FEA on skirt/shell hotboxes

FEA on Packing Supports

2018 Dow Chemical Company, DOWLEX SCHKOPAU PROJECT, Germany

[Pressure Vessels and Shell & Tube Heat Exchangers](#)

Mechanical: Bentley AutoPIPE Vessel for ASME Sect.VIII Div. 1 and AD-2000

2018 ENI Mexico, ORF EPC, Mexico

[Separator Mechanical Calculations](#)

Mechanical: PV Elite for ASME Sect.VIII Div. 2 Ed. 2017

2018 UNIGAS, Biomass Plant, Italy

[Flare Process and mechanical Calculations – Heat Exchanger and Vessel Mechanical Calculations](#)

Mechanical: PV Elite for EN 13445 pressure calculations

Flare Process Calculation: FlareSIM

2018 JSC Shchekinoazot, Methanol plant, Russia

[Feed/Effluent Exchanger](#)

Mechanical: PV Elite for ASME Code and Bentley AutoPIPE Vessel for GOST Code

Drawing: AutoCAD

2017

2017 Reliance Industries Limited (RIL), Jamnagar, Gujarat, INDIA

[Product Purge Bin Package Engineering \(UNIPOL Technology and Licensor\), Induced Loads Calculations, Process Calculations and Equipment Sizing](#)

CFD and Induced Loads Design: ANSYS Fluent 14.5 and Proprietary Software

FEM: ANSYS Workbench 14.5

Mechanical: PV Elite for ASME Code

2017 KAR OIL and GAS COMPANY Erbil, Khurmala Field Gas Plant, IRAQ

Khurmala Oil & Gas Field

[Gas Sweetening Plant, Plant Design and Process Calculations - Equipment Sizing](#)

Process: ASPENTECH HYSYS V9

Thermal Design Heat Exchangers, Reboiler, Air Cooler: ASPEN Exchanger Design and Rating V9

Mechanical: PV Elite for ASME Code - AutoPipe Vessel (Microprotocol) for GOST Code

2017 Sinopec Ningbo Engineering/JSC NIPIgaspererabotka (NIPIGas)/TECNIMONT Italy,

Amur Gas Processing Plant, RUSSIA for NIPIgaspererabotka-GAZPROM

No. 188 Heat Exchangers, According to BPVC ASME VIII Div. 1/API 660/GOST R 52587

Thermal Calculation: HTRI Xchanger Suite



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Mechanical Calculations: PV Elite

2017 RLOC, Olefin Project, QATAR Emirate
Ras Laffan Olefin Project
No. 1 Hydrogen Crack Gas Dryer According to BPVC ASME VIII Div. 2
Mechanical Calculations: PV Elite

2017 IPSL, Point Lisas Methanol Plant, TRINIDAD
No. 2 Topping Column Condensers, According to PD-5500
Thermal Calculation: HTRI Xchanger Suite
Mechanical Calculations: PV Elite

2017 ENPPI, ZOHR Onshore-Phase 1, EGYPT
ZOHR Plant
No. 1 Stabilizer Feed Coalescer, According to BPVC ASME VIII Div. 1
Mechanical Calculations: PV Elite

2017 ORPIC, LIWA PLASTICS INDUSTRIES COMPLEX PROJECT, Sohar, Sultanate of OMAN, POLYETHYLENE UNIT
No. 2 off Product Purge Bin, According BPVC ASME SECT. VIII Div. 1
Mechanical Calculations: PV Elite
FEA on internals and Fatigue Analysis: ANSYS 14.5.7

2017 SAUDI ARAMCO - SAUDI ARABIA ABQAIQ Plant - Closed Drain System
No. 20 off Vessels
Platform Calculations according to ARAMCO Specifications
Calculations: PRO-SAP RY2016

2017 SAUDI ARAMCO - SAUDI ARABIA ABQAIQ Plant - Closed Drain System
No. 20 off Vessels, According to BPVC ASME Sect. VIII Div. 1
Mechanical Calculations: PVElite

2016

2016 TECHNIP ZapSibNeftekhim (SIBUR), 2.0 MTA Tobolsk Western-Siberian Complex, RUSSIA
HDPE Reactor-ZAPSIB 2-PE Plant, Jacketed Loop ID 676 mm – Length 70.150 mm
Code: GOST R 52857
Mechanical Calculations: AutoPipe Vessel (Microprotocol)

2016 AGRITRE - TOZZI SUD-COMART-TRE – Centrale Biomassa Sant'Agata di Puglia (FG), ITALY
Steam Condenser
NKU Heat Exchanger ID 2500/2000 – 2974 'U' tubes, Straight Length 8800 mm
Code: BPVC ASME SECT. VIII Div. 1 – TEMA C – HEI (PED)
Thermal Calculations: AspenONE AEDR 9.0
CFD: Autodesk CFD
Mechanical Calculations: PVElite
Drawings: AutoCAD

2016 TECHNIP, ZapSibNeftekhim (SIBUR), Tobolsk Western Siberia, RUSSIA
LLDPE/HDPE Plant
No. 7 off Oil Separators & Filters
Code: GOST R 52857
Mechanical Calculations: AutoPipe Vessel (Microprotocol) 2015 ADGAS Das Island - UAE
IGD - Expansion Package 4 Dehydration Unit



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Mechanical Verification BPVC ASME SECT. VIII Div. 1 & Economic Evaluation

Code: BPVC ASME Sect. VIII Div. 1

Mechanical Calculations: PV Elite

2016 PETRONAS – SAMSUNG – AMEC FW RGT-2 Terminal Project, Malaysia

No. 1 Jetty KO Drum ID 3.300 mm x L 8.300 mm

Code: BPVC ASME SECT. VIII Div. 2

FEA: ANSYS Workbench 14.5

Fatigue Calculation: BPVC ASME SECT. VIII Div. 2

2015

2015 SAUDI ARAMCO - SAUDI ARABIA

ABQAIQ Plant - Closed Drain System 25 Vessels

Mechanical Calculation BPVC ASME SECT. VIII Div. 1

Code: BPVC ASME Sect. VIII Div. 1

Mechanical Calculations: PV Elite

2015 GM-GREENMETHANE - SENECA Srl - ITALY

CO2 REMOVAL SECTION - MILANO

Gas Unit Piping Stress Analysis & Mechanical Calculation EN 13480-3

Code: EN13480-3

Mechanical Calculations: Self-made Software

Piping Stress Analysis: BENTLEY AutoPIPE

2015 ENAR Petroleum Refinery - PAKISTAN

ARL Upgrading Project - High Pressure Heat Exchangers

Mechanical Calculation BPVC ASME SECT. VIII Div. 1 LETHAL/TEMA R and FEA on Tubesheets

Code: BPVC ASME Sect. VIII Div. 1 Lethal Service & TEMA

Mechanical Calculations: PV Elite

FEA: ANSYS

Fatigue Analysis: BPVC ASME Sect. VIII Div. 2

2015 KHABAROVSK OIL REFINERY Khabarovsk, RUSSIA

TRANSFER PIPELINE

Clad Piping ID 2.500 mm Stress Analysis EN 13480, Mechanical Design and FEA

Code: EN13480-3

Mechanical Calculations: Self-made Software

Piping Stress Analysis: BENTLEY AutoPIPE

FEA: AutoFEM + LISA

2015 PETRONAS RAPID PROJECT Southern Johor, MALAYSIA

No. 7 LPG Bullets

ID 8.500 mm x L 61.000 mm

ID 6.000 mm x L 60.000 mm Mechanical Design, FEA on vessel and nozzles, Mounded Soil Calcs & Construction Drawings

Code: BPVC ASME SECT. VIII Div. 2, EEUMA 190

Mechanical Calculations: PV Elite

FEA: ANSYS & Autodesk Simulation Mechanical

2015 UHDE THYSSEN GROUP SAFCO IV PROJECT, SAUDI ARABIA

AMMONIA CONVERTER

ID 3.210 mm x L 20.585 mm Design Pressure 129,5 bar, Mechanical Design & Construction Drawings

Code: AD-2000

Mechanical Calculations: Sant'Ambrogio Software

FEA & Fatigue Thermal Calculation: ANSYS Workbench 14.5 & BPVC ASME SECT. VIII Div. 2



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2014

2014 RUSSNEFT - ORSK REFINERY - RUSSIA
WASTE HEAT EXCHANGER

[Thermal Verification, Mechanical Design & Tubesheet FEA](#)

Code: BPVC ASME Sect. VIII Div. 1 & TEMA

Process Calculations: HTRI Xchanger Suite

Mechanical Calculations: PV Elite

FEA: Tubesheet and channel ANSYS

2014 MARUBENI - ATYRAU REFINERY - KAZAKHSTAN
WASTE HEAT EXCHANGER

[Thermal Verification, Mechanical Design & Tubesheet FEA](#)

Code: BPVC ASME Sect. VIII Div. 1 & TEMA

Process Calculations: HTRI Xchanger Suite

Mechanical Calculations: PV Elite

FEA: Tubesheet and channel ANSYS

2014 RELIANCE INDUSTRIES – JAMNAGAR REFINERY J3 Expansion Project, Gujarat - INDIA
PRODUCT PURGE BIN

Code: BPVC ASME Sect. VIII Div. 1

FEM Analysis on Internals Cones, Shell-to-Skirt Join, Conical Transition and Conical Head, Horizontal Hydrotest

Fatigue Analysis acc. to BPVC ASME Sect. VIII Div. 2 (with ANSYS Mechanical Workbench)

FEM Analysis ANSYS Mechanical Workbench

2013

2013 TOTAL - TECNIMONT TEMPORA ROSSA - ITALY

Launch and Receiving pig stations

[Complete Mechanical Design](#)

Code: BPVC ASME Sect. VIII Div. 1 & EN 13445

Mechanical Calculations: PV Elite

2013 ENI CONGO Marine XII BLOCK LITCHENDJILI GAS DEVELOPMENT Work Package WP5 Litchendjili Onshore Plant - CONGO

Stabilizer Column

[Complete Mechanical Design](#)

Code: BPVC ASME Sect. VIII Div. 1

Mechanical Calculations: PV Elite

2012

2012 - IWH Project, Ourhoud Oil Field - ALGERIA

Increased Water Handling FEED Study

[Complete Mechanical Design Reactor & Heat Exchangers](#)

Code: BPVC ASME Sect. VIII Div. 1 & 2 & TEMA

Mechanical Calculations: PV Elite

2012 - BURUN FIELD SPP Facility Nebit Dag - TURKMENISTAN
AGZU's WELL TESTING UNIT



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Complete Process & Mechanical Design Skid Plants

Code: BPVC ASME Sect. VIII Div. 1

Mechanical Calculations: PV Elite

Drawings: CadWorx

2012 - ASHUGANJ FERTILIZER & CHEMICAL COMPANY LTD - BANGLADESH

Revamping of AMMONIA CONDENSER ITEM 58-2104

Complete Thermal & Mechanical Design Heat Exchanger

Code: BPVC ASME Sect. VIII Div. 1 & TEMA

Process Calculations: HTRI Xchanger Suite

Mechanical Calculations: PV Elite

2012 STATOIL FEED Study Topside Project Aasta Hansten Field - NORWAY

Gas Dehydration Unit

Complete Process & Mechanical Design

Code: BPVC ASME Sect. VIII Div. 1 & 2

Process Calculation: HYSYS integrated with self-made software

Mechanical Calculations: PV Elite

2011

2011 - KHABAROVSK OIL REFINERY Khabarovsk, RUSSIA

TRANSFER LINE FOR HIGH VACUUM FURNACE

Complete Piping Stress & Mechanical Design & Layout

Code: ANSI B31.3

Mechanical Calculations: Self-made Software

Drawings: AutoCAD

2011 - ANPZ - ATYRAU DEEP CONVERSION COMPLEX PROJECT - KAZAKHSTAN

DEA REGENERATION UNIT

Complete Process & Mechanical Design

Code: BPVC ASME Sect. VIII Div. 1 & 2

Process Calculation: HYSYS integrated with self-made software

Mechanical Calculations: PV Elite

Drawings: CadWorx Plant and P&I

2011 - UCH gas field - PAKISTAN

Amine gas sweetening units and incinerator package

Complete Mechanical Design Columns & Heat Exchangers

Code: BPVC ASME Sect. VIII Div. 1 & TEMA

Mechanical Calculations: PV Elite

Drawings: AutoCAD

2011 – VOPAK Terminal Vlissingen – NL

MOUNDED BULLET 3.370 cu.m.

Mechanical Design & FEA

Code: BPVC ASME Sect. VIII Div. 2

Mechanical Calculations: PV Elite

FEA: AutoFEM & ANSYS

2011 - UCH-II Development Project - PAKISTAN

GAS DEHYDRATION Package

Complete Mechanical Design Columns & Heat Exchangers

Code: BPVC ASME Sect. VIII Div. 1 & 2 & TEMA



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Mechanical Calculations: PV Elite

2010

2010 - NATIONAL IRANIAN OIL ENGINEERING & CONSTRUCTION COMPANY ESFAHAN REFINERY UPGRADING - IRAN
RFCC - FEED PREHEATING & FRACTIONATION

Columns & Reactors Mechanical Design

Code: BPVC ASME Sect. VIII Div. 1

Mechanical Calculations: Compress

2010 - HUCHEMS Plant HNO₃ – SOUTH KOREA
AMMONIA ABSORPTION TOWER

Column Mechanical Design

Code: BPVC ASME Sect. VIII Div. 1

Mechanical Calculations: Compress

2010 - INEOS BIO Chemical Plant Seal Sand - UK
FUEL GAS DESULPHURISATION UNIT

Preliminary Complete Process Design

Code: BPVC ASME Sect. VIII Div. 1

Process Calculation: HYSYS integrated with self-made software

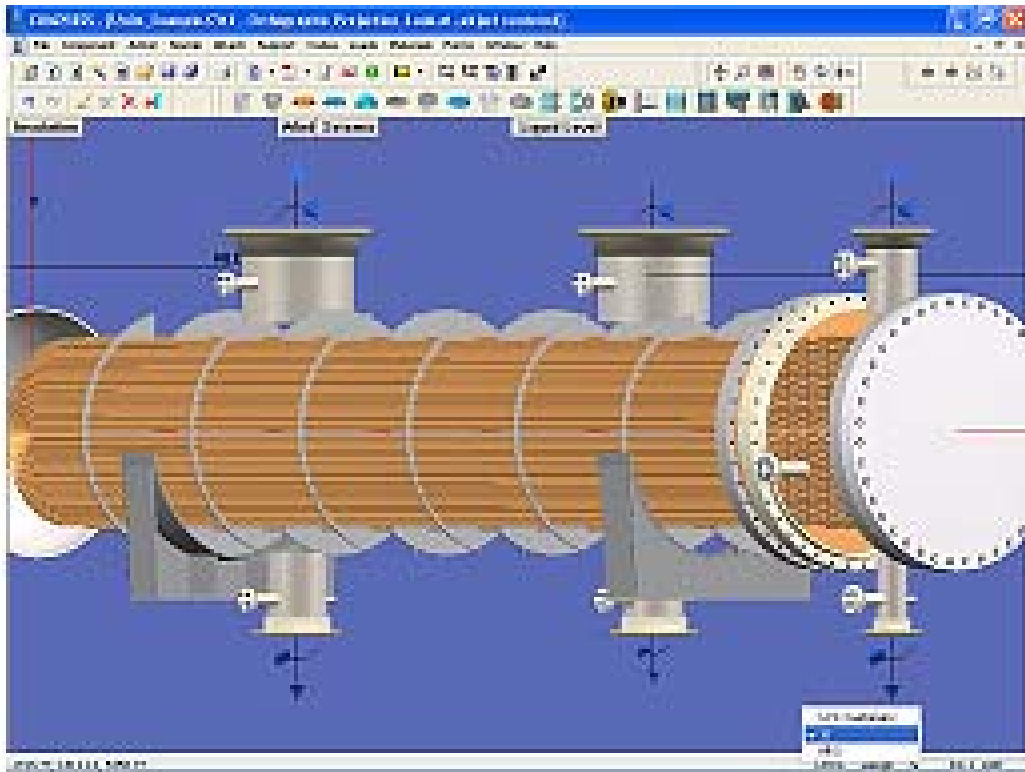
Drawings: CadWorx Plant and P&I

1982 – IMS Industrie Meccaniche Scardellato SpA
HYDRAULIC CRANE 400 ton

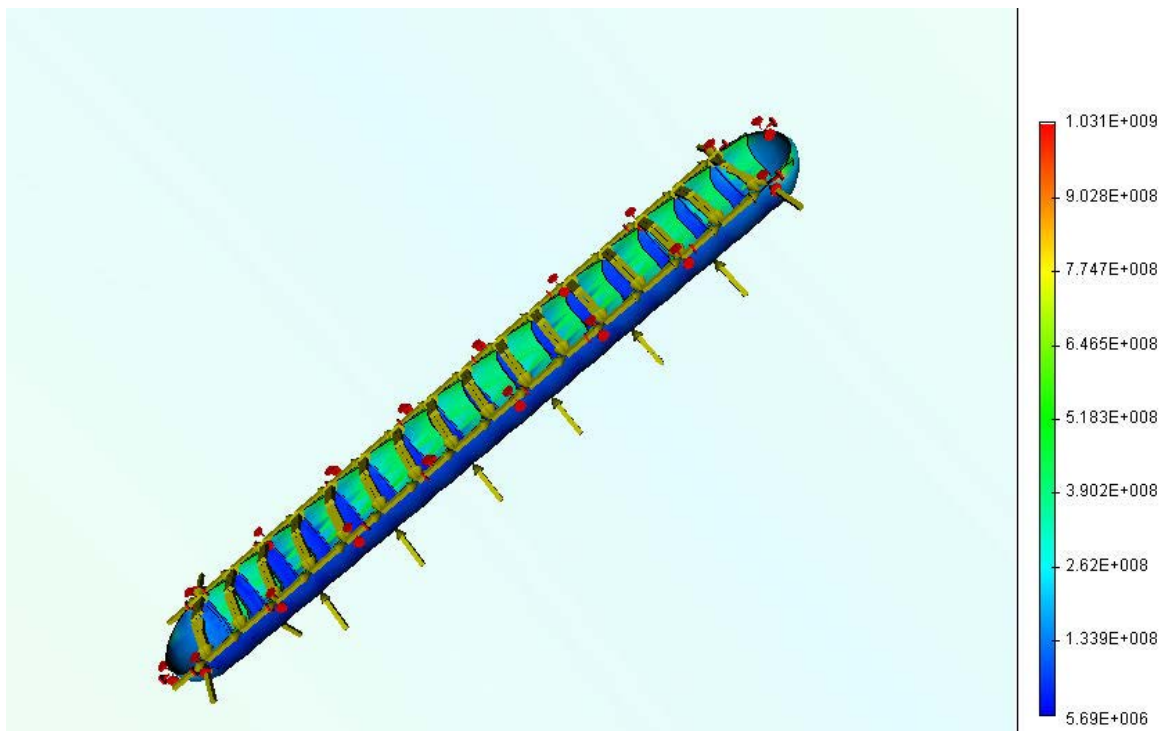
Mechanical Design – Foundation Design – Shores Consolidation



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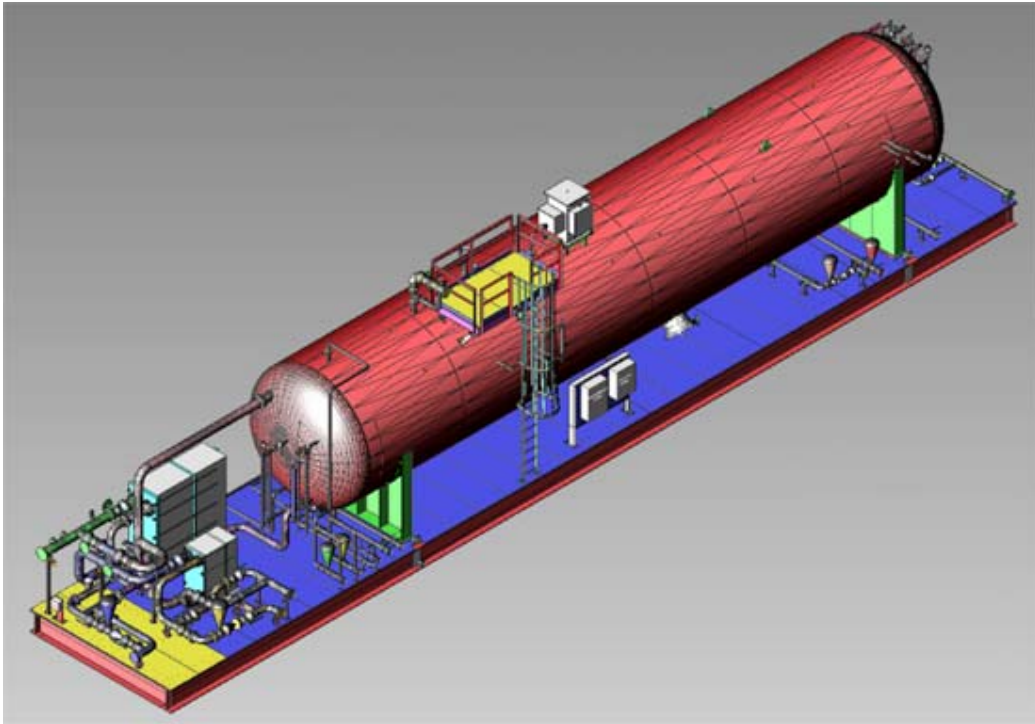
Heat Exchanger 3D Drawing



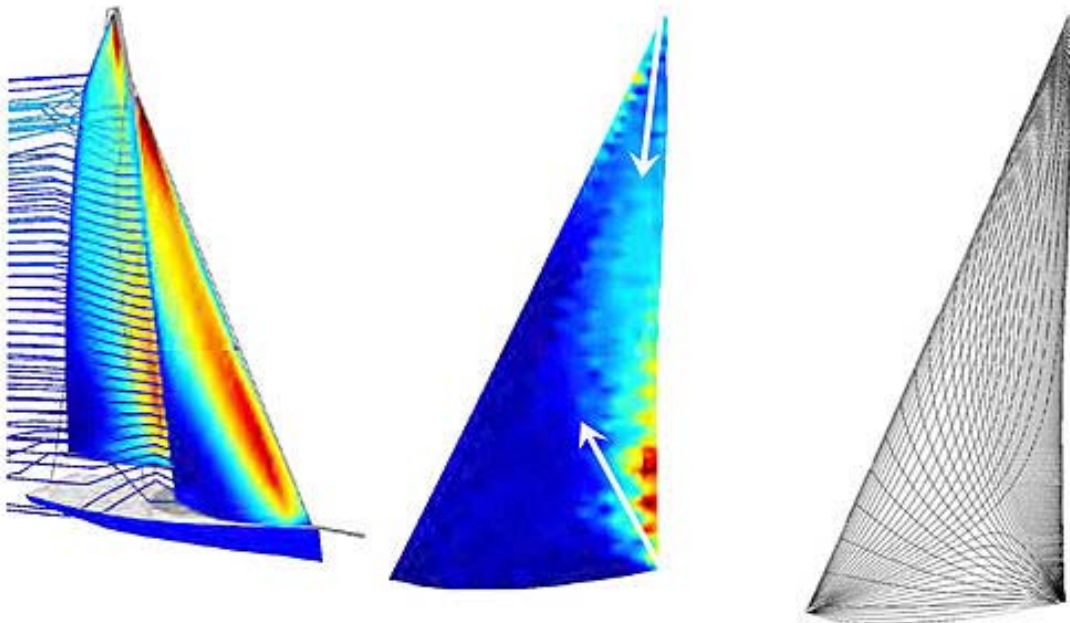
FEM on Mounded Bullet



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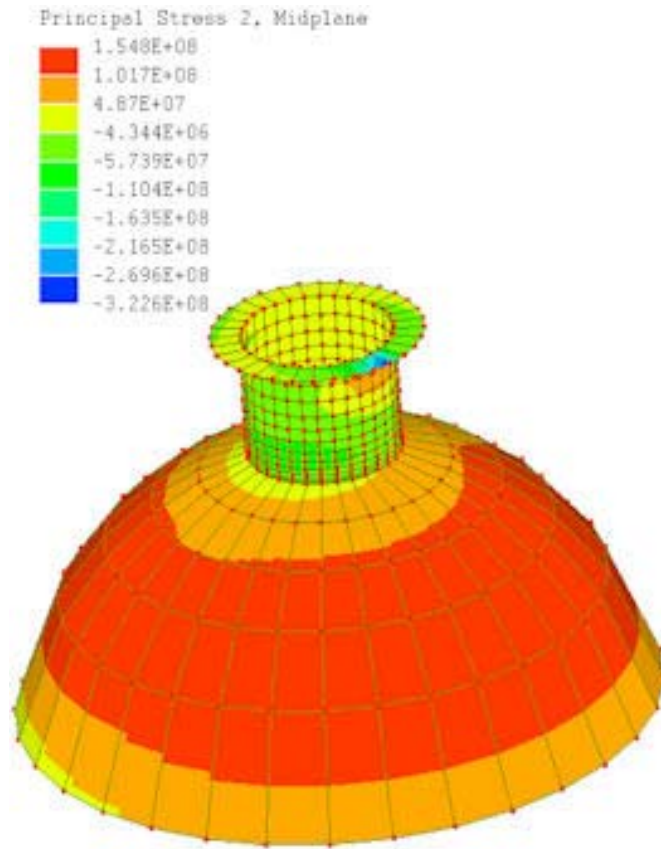
Process Skid



Sail Design

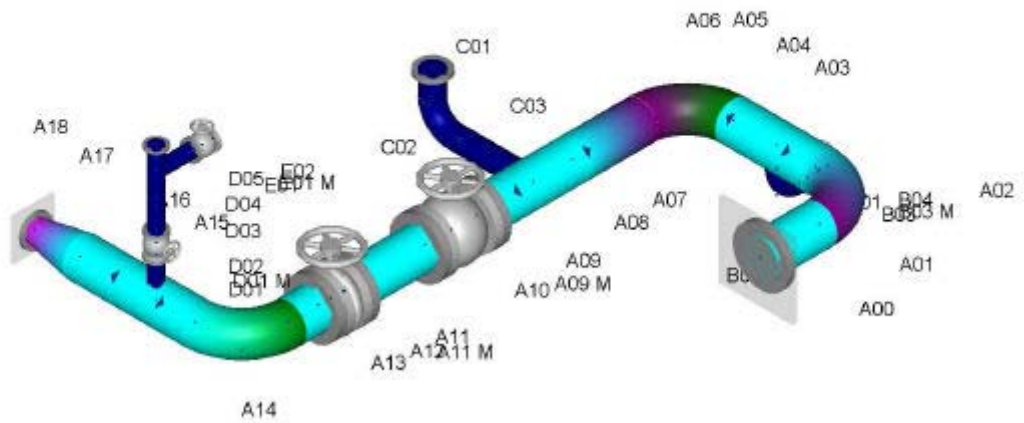


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FEM on Head Nozzle

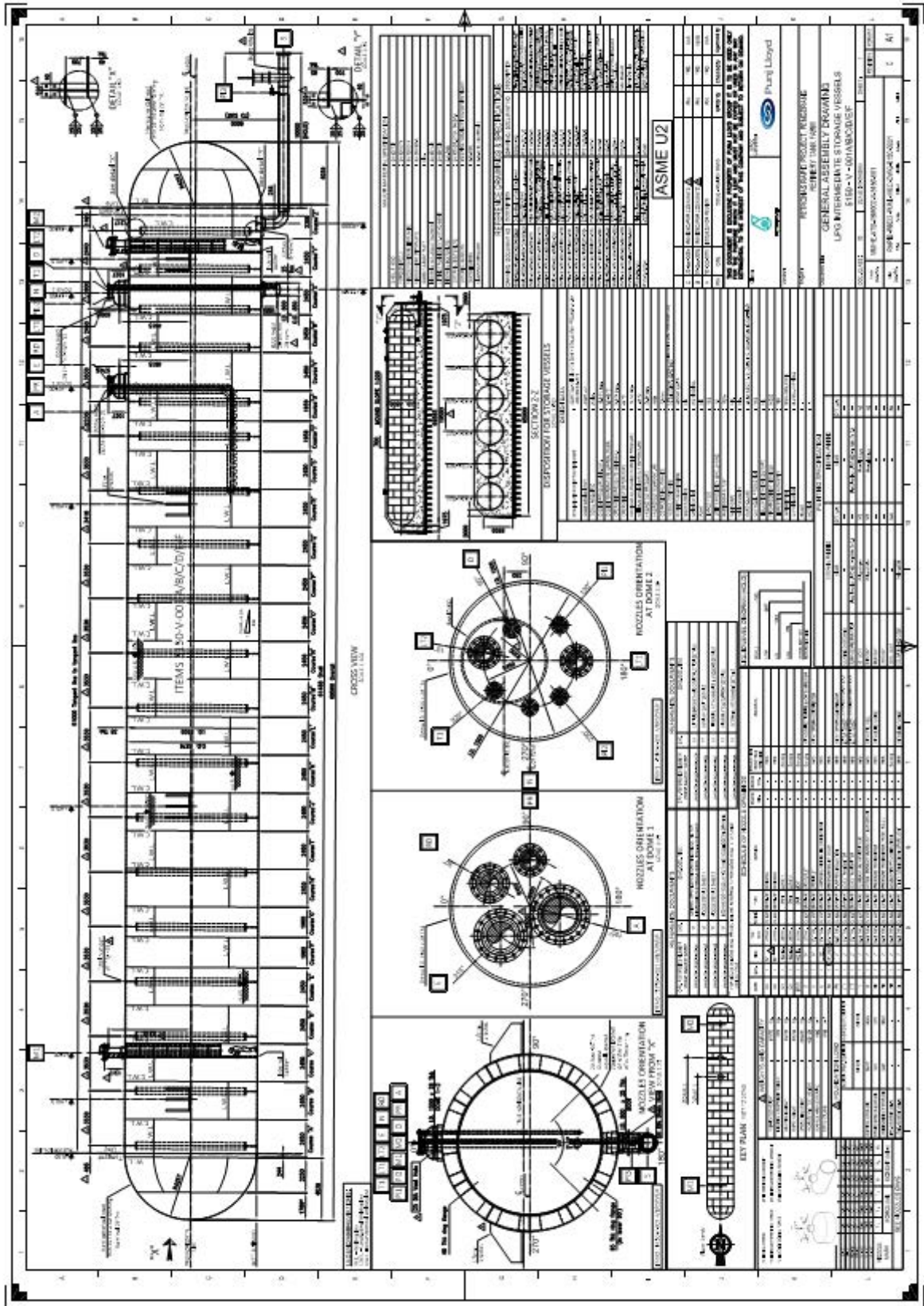
Ratio to Allowable Stress:



Piping Stress Analysis



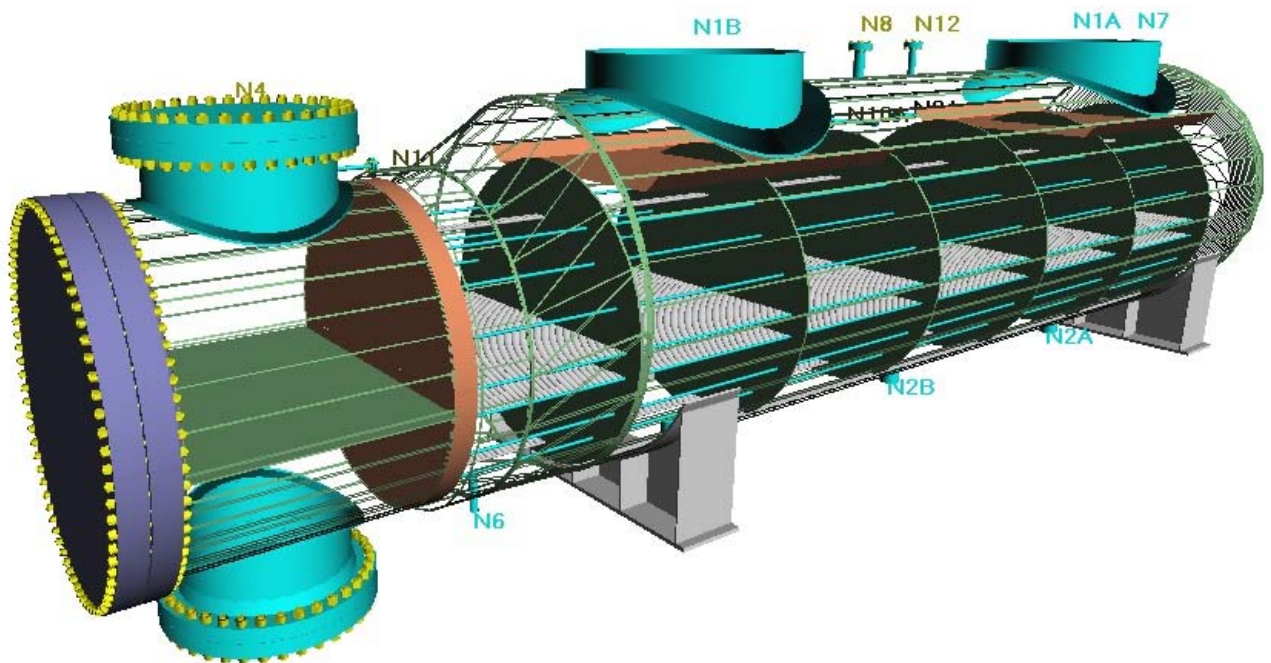
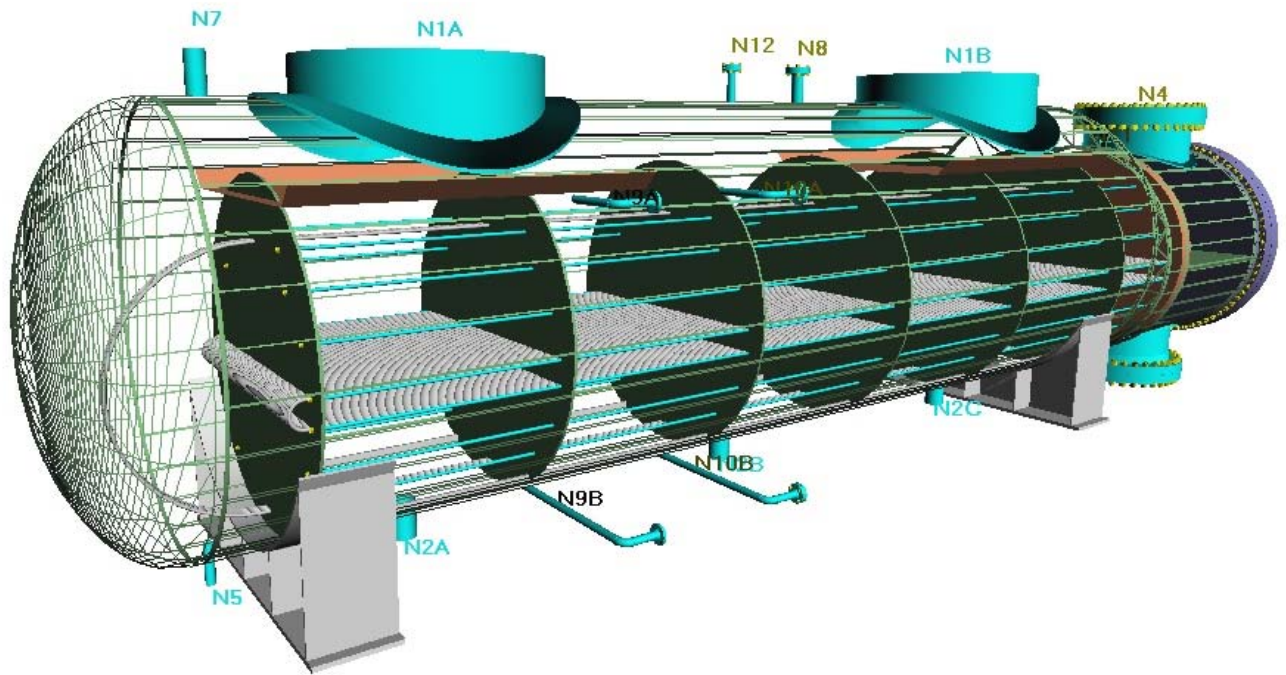
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LPG Storage Vessel (Mounded Bullet 3.800 cu.m)



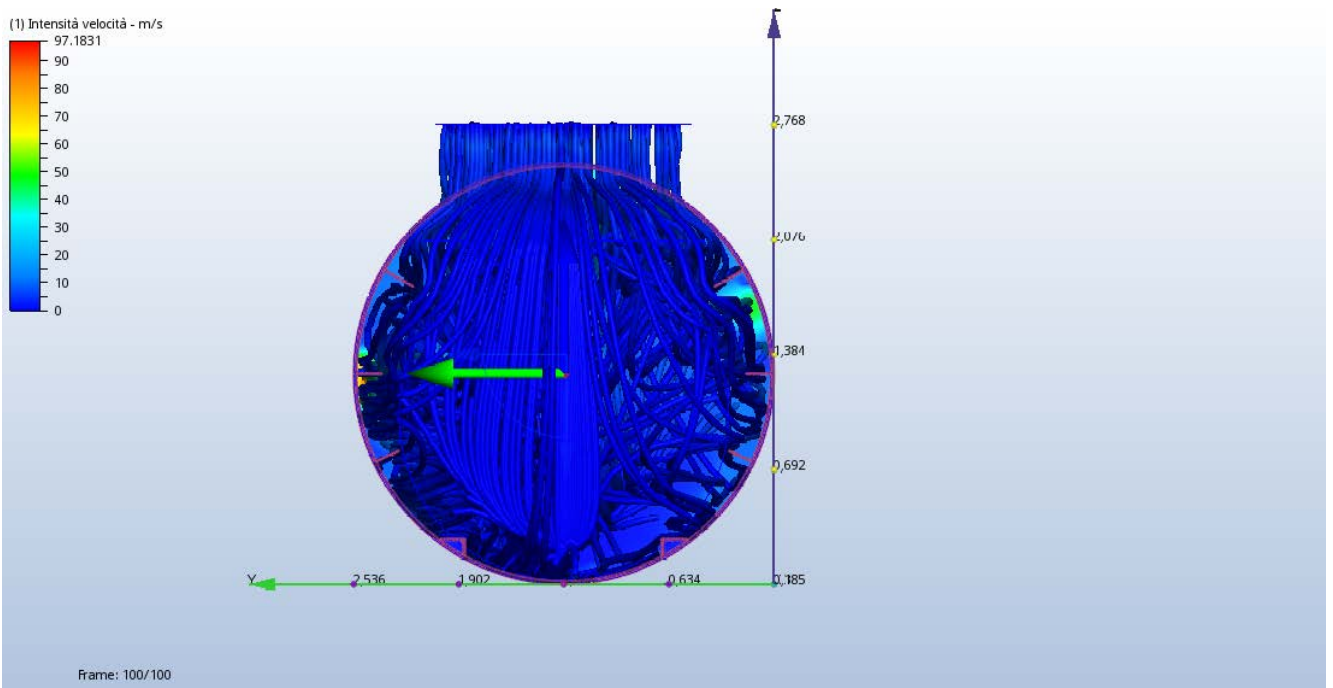
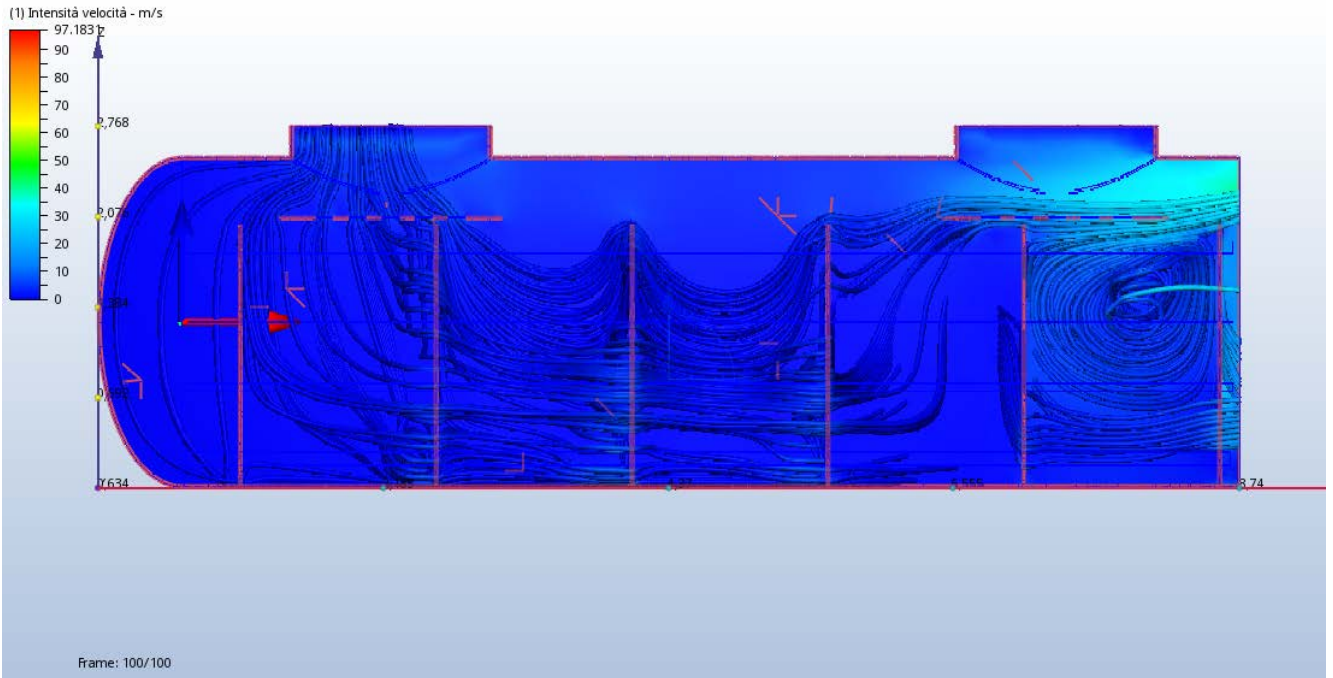
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Steam Condenser (ID 2500/2000 No. 2974 'U' tubes Length 8800 mm)



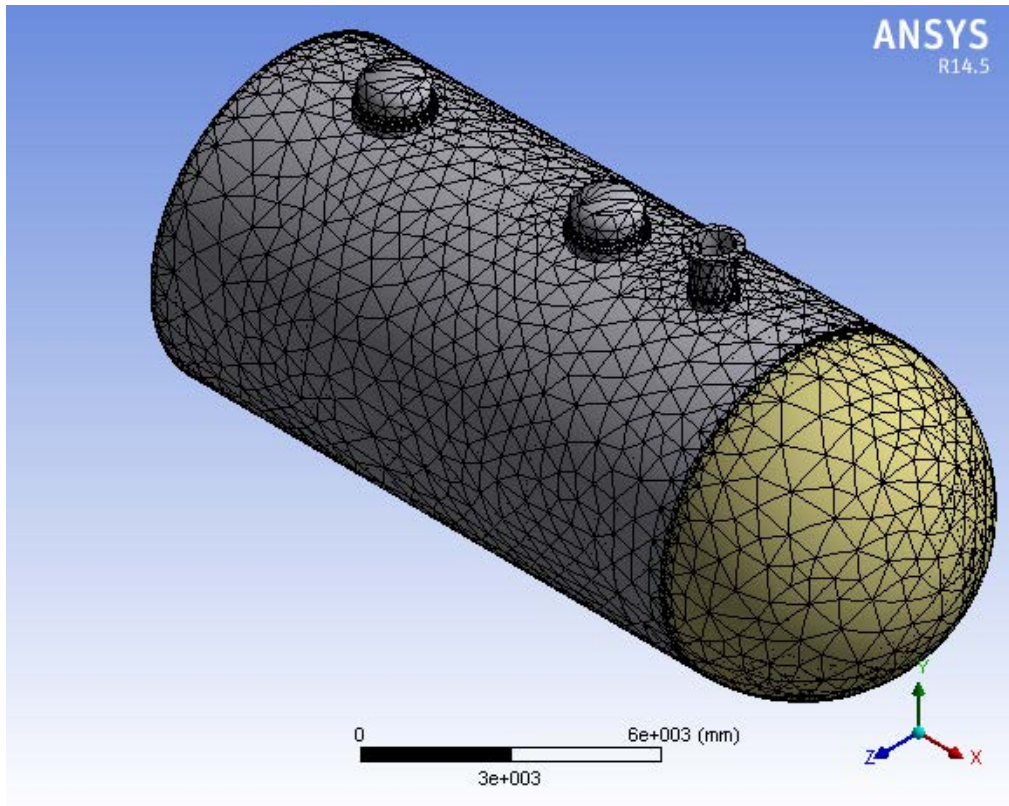
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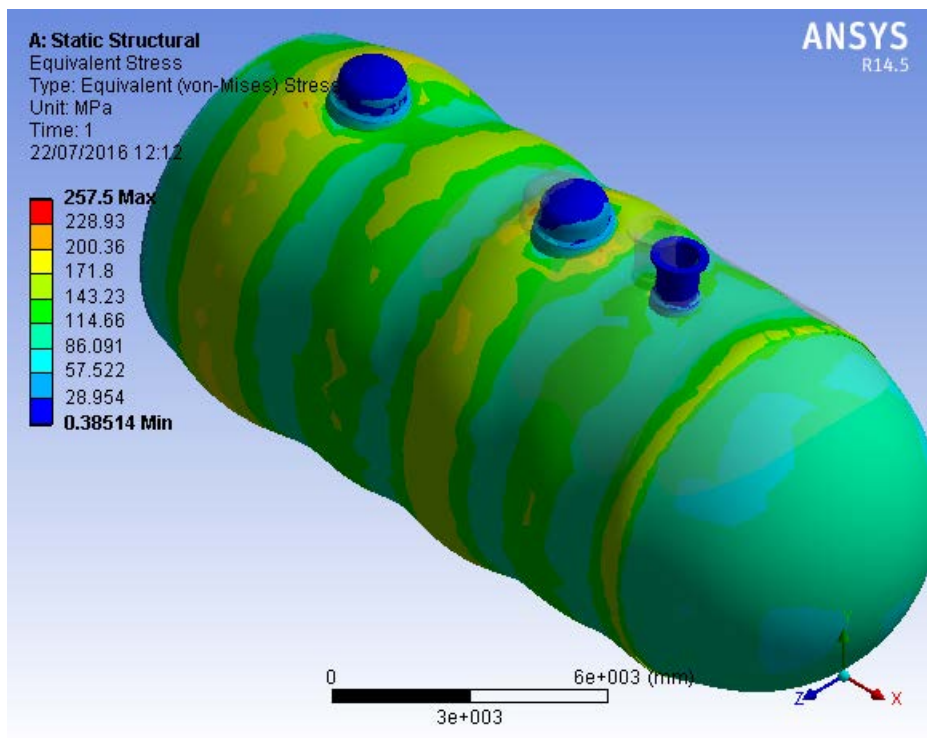
CFD on Steam Condenser (ID 2500/2000 No. 2974 'U' tubes Length 8800 mm)



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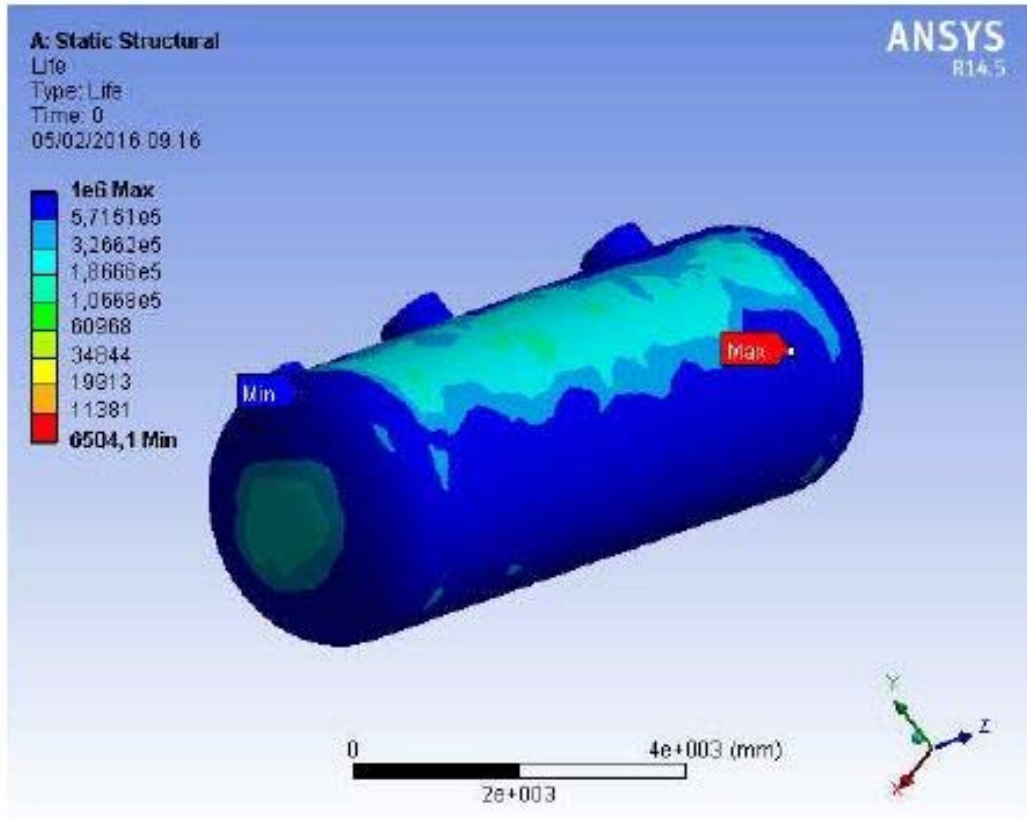
Meshing on Bullet for Nozzle Stress verification



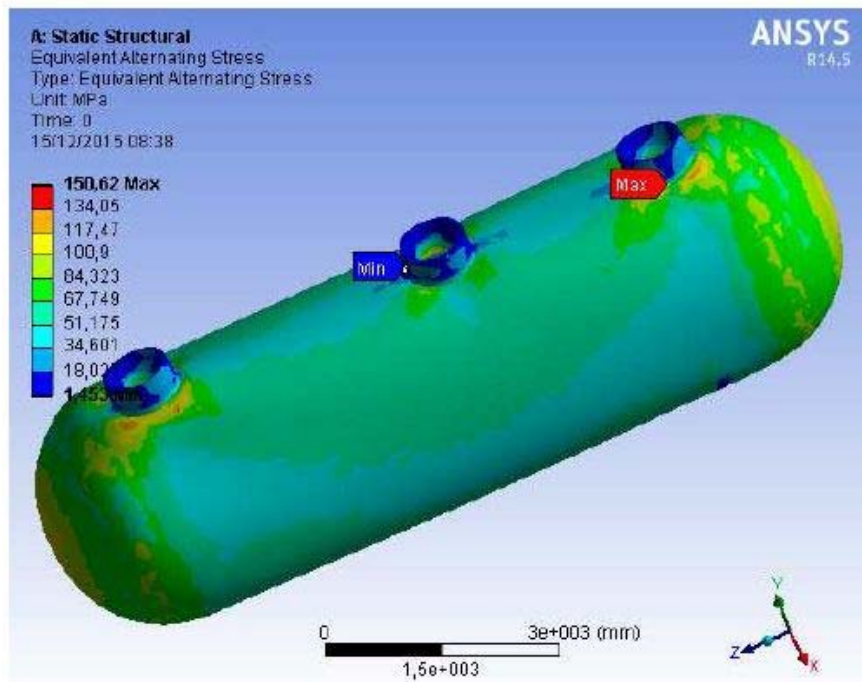
Stress Verification on Bullet's Nozzles



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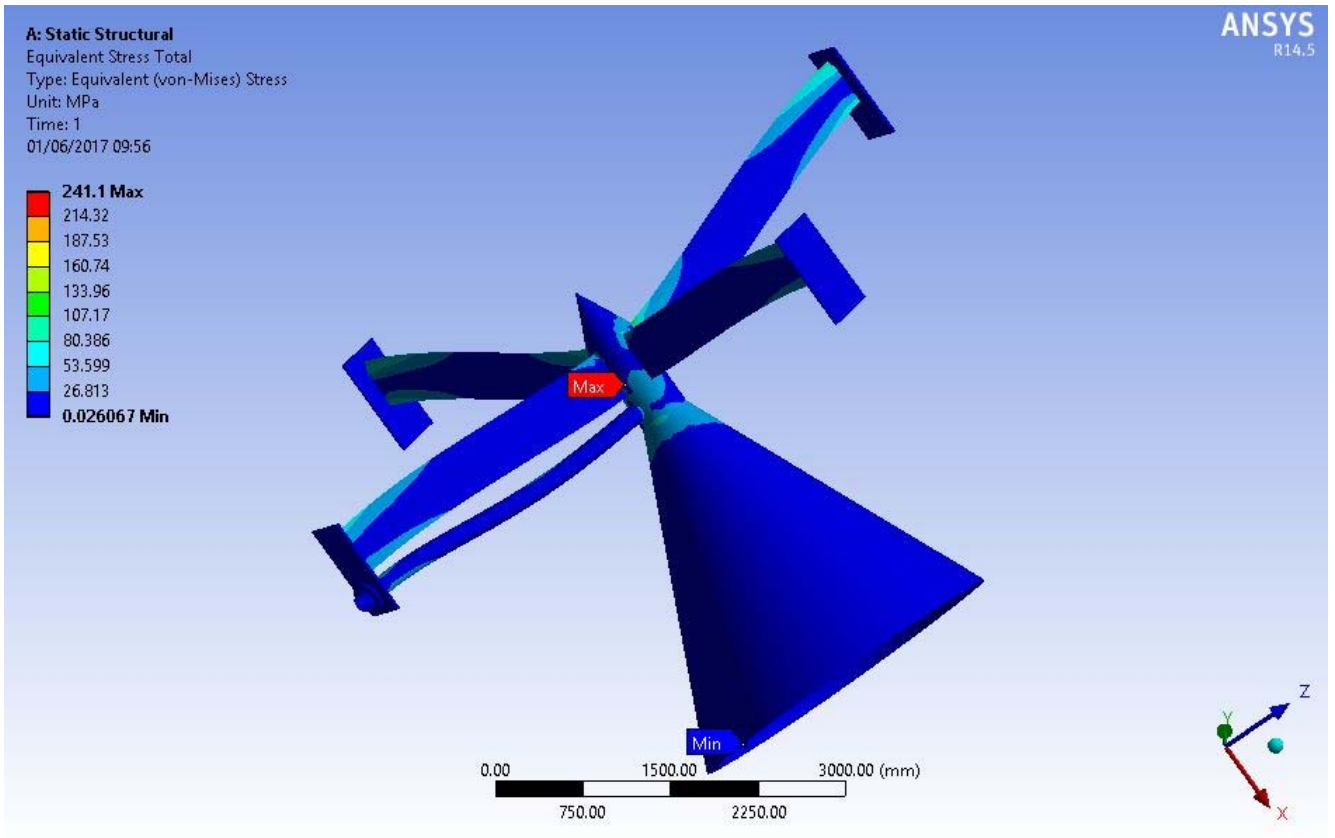
Life Calculation for a Jetty KO Drum



Equivalent Alternating Stress Jetty KO Drum



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FEA on Internal of Product Purge Bin



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Hydraulic Crane – 400 tons



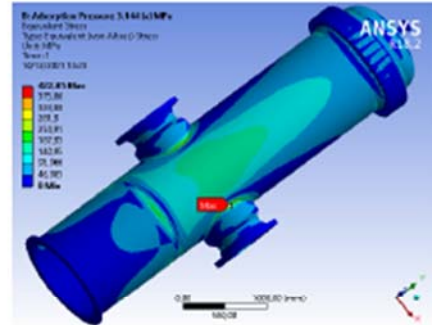
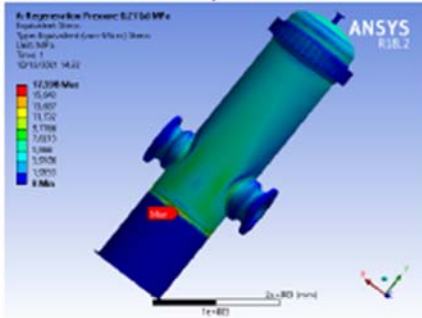
Hydraulic Crane 400 tons



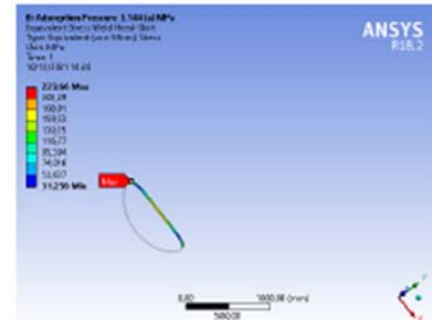
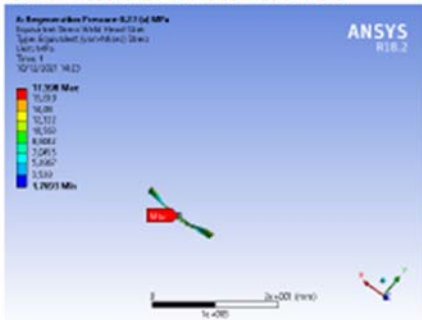
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FEA Result (1)

3.1.2. Result for complete vessel



3.1.3. Result for Skirt to head weld



3.1.4. Result for Nozzle N1-N2

