



Our people  
create endless  
possibilities

We empower our people to  
deliver services that create a  
sustainable world



ALTRAD BABCOCK EUROPE S.A.  
Company profile

[altradbabcock.pl](http://altradbabcock.pl)  
[uk.altradservices.com](http://uk.altradservices.com)



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# Altrad in Poland



Integrated Quality, Environment, Health and Safety and Quality Management System in Welding, Meeting the requirements of ISO 9001, ISO 45001, ISO 14001, ISO 3834-2, ISO 19443 - Manufacture and supply of pressure components, steel structures, and spare parts for the nuclear energy sector, as well as ISO 37001 - Anti-bribery management system and Lab certification acc. to ISO 17025

## Key Dates:

**1992**  
Company was established

**2022**  
Capital changes, company is taken over by Altrad Group



**Altrad Babcock Europe S.A.**

ul. Golejowska 73 b  
44-207 Rybnik  
Poland

*Bureau Veritas Certification Holding SAS - UK Branch certifies that the Management System of the above organization has been audited and found to be in accordance with the requirements of the management system standards detailed below.*

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**ISO 19443:2018**  
Scope of certification

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For the ITNS activities:  
Production and delivery of pressure elements, steel structures and spare parts for the nuclear energy sector.

Original cycle start date:	19 September 2025
Expiry date of previous cycle:	NA (Initial Audit)
Certification / Recertification Audit date:	13 June 2025
Certification / Recertification cycle start date:	19 September 2025
Subject to the continued satisfactory operation of the organization's Management System, this certificate expires on:	18 September 2028

Certificate No.: PL018041    Version: 1    Issue date: 19 September 2025

Contract number: 26599047



Joanna Waberska  
Local Technical Manager  
Signed on behalf of BVCH SAS UK Branch



Certification Body Address: 5th Floor, 66 Prescot Street, London, E1 8HG, United Kingdom  
Local Office: ul. Miodowa 4, 02-796 Warszawa

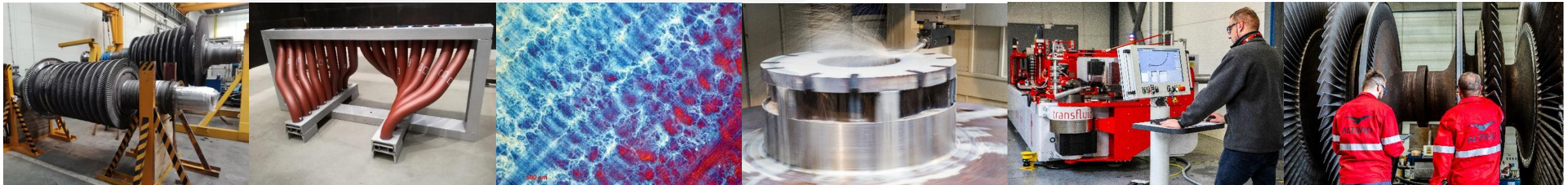
Further clarifications regarding the scope of this certificate and the applicability of the management system requirements may be obtained by consulting the organization.



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# Scope of work

- Turbine & Generator (mechanical part) Assembly and Overhaul
- Automatic control, measuring and electrical engineering
- Boilers and auxiliary equipment with air pollution control installation
- DT & NDT
- Manufacturing (carbon steel & stainless steel)
- Machining (heavy & precision)





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# Manufacturing Carbon & Stainless Steel

Stainless steel manufacturing

Carbon manufacturing

Large-scale Machining

Precision CNC Machining

Helium Leak Test (own helium chamber)

Hydraulic pressure test

Orbital welding

Clean Room (Class 8 ISO  
14644-1, temp. 20 +/- 1 °C,  
Humidity below 65%, 84 m2)



Pressure parts (Skids, super heaters, Heat exchngers, Headers)  
ITNS Parts (supports, cases etc.)  
Crogenic Parts (pressure parts, mechanical parts)  
Keeping enviroment for Nuclear industry & meeting all requirments  
from ITER and F4E  
(include air condition for all stainless steel area 20 with +/- 4)



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# Large-scale and precision machining

## Large-scale Machining

Vertical lathe Machine

Horizontal Milling and Boring  
Machine

Horizontal lathe Machine



## Precision CNC Machining

4-Axis Vertical Machining Center  
OKUMA Genos M560V-e

Milling-turning center OKUMA  
Genos L3000-e MYx1000

Wire EDM Sodick ALC600G  
Premium



Two rotor balancing machines:  
Horizontal balancing machine SCHENCK H9T  
Horizontal balancing machine SCHENCK HE40BU



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# Non-destructive & Destructive Testing



**NDT Surface testing group : VT,  
MT, PT**



**Volumetric testing group: UT  
and RT**



**Field metallographic replication**



**Testing of chemical composition of  
material**



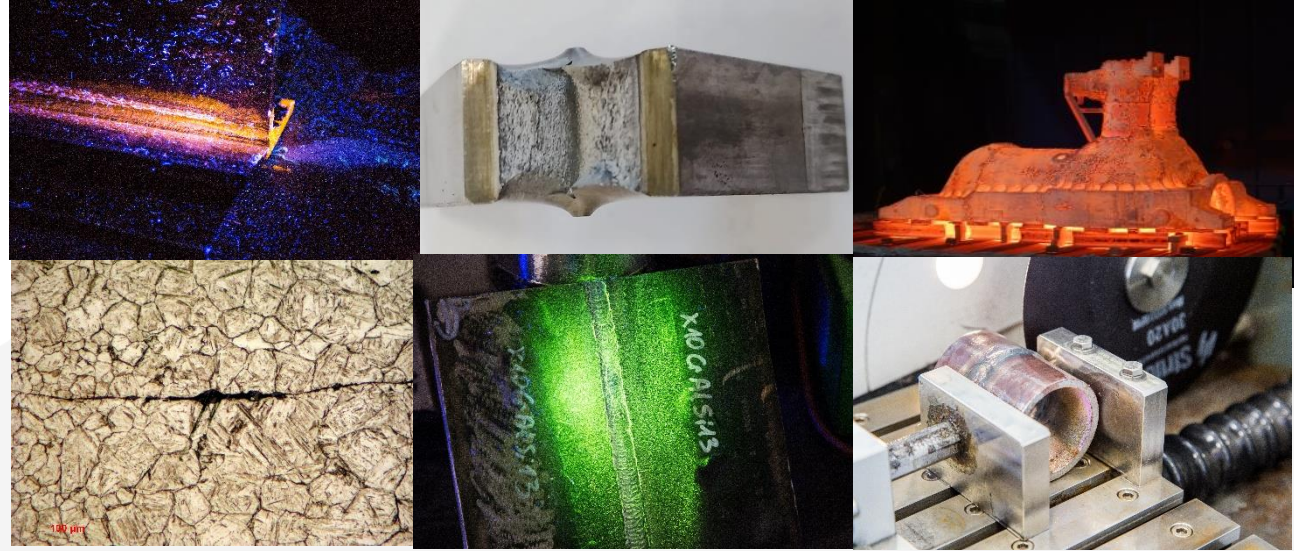
**Macro and microscopic  
metallographic testing of welded  
joints,**



**Hardness Test**



**Metal tensile testing – up to 100kN  
and Impact Testing (300J)**



**The laboratory staff is certified in accordance with EN ISO 9712.  
The laboratory has recognition of the Technical Inspection Office (UDT) and  
certification according ISO 17025.**

Whole range of non-destructive testing, destructive testing, as well as services in evaluation of technical condition of rotary machines using vibroacoustic methods.



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# Technology & Engineering Department

3D scanning

Development of technology  
and execution of heavy  
lifting transport

Reverse engineering

Assembly by using  
scanners

Advanced geometric  
measurement

Designs and analyses using CAE  
Traverse

Documentation for the  
modernization and repair of  
pressure equipment for the needs  
of the Technical Inspection Office



Excellent technical facilities, equipped with three scanners, CMM measuring devices and Laser Tracker, while CAD and Poliworks computer programmes enable us to solve technical problems encountered in the energy industry.



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# ITER BCM Project - Framework Contract

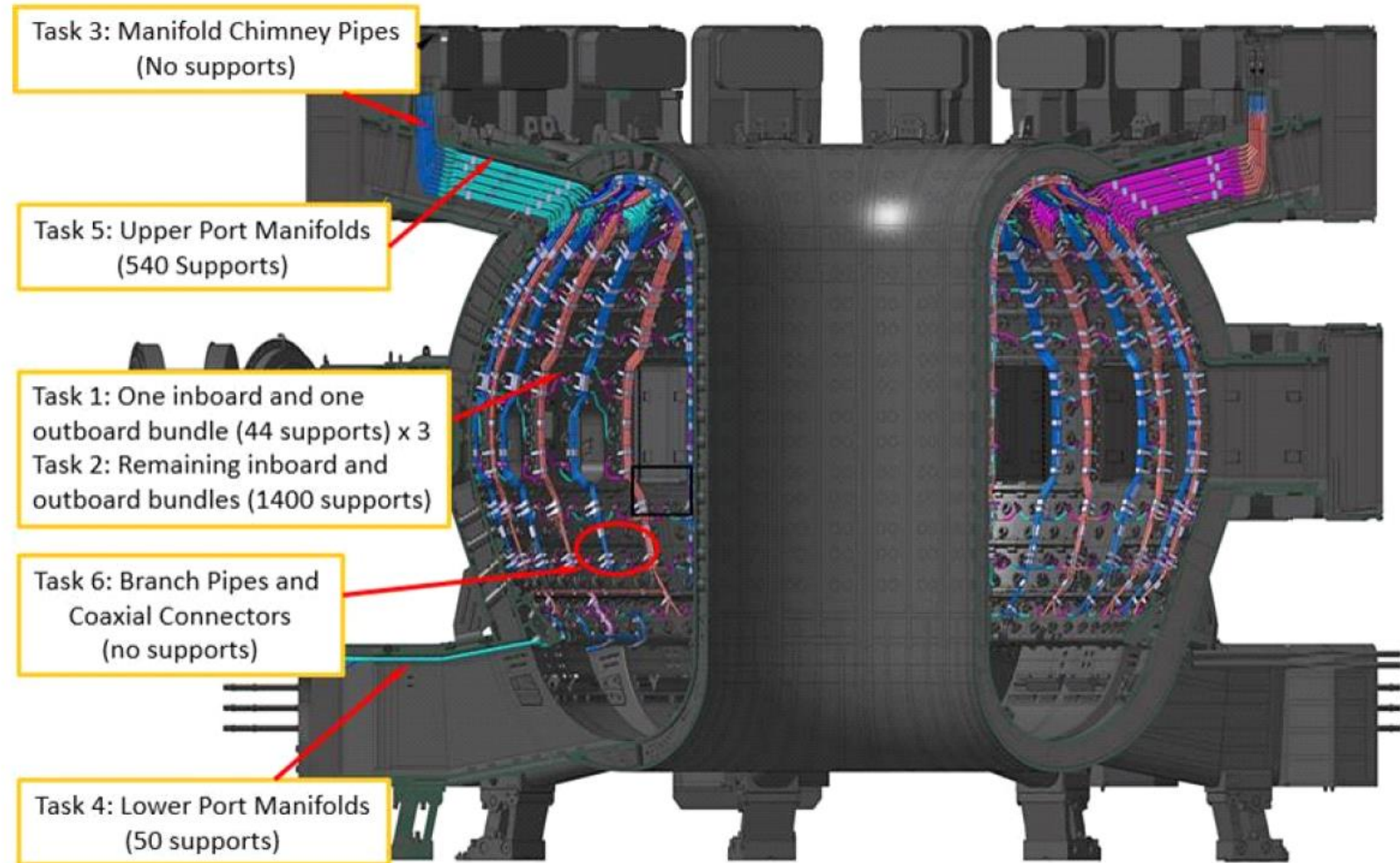
The Manifold scope will be procured in eight “tasks” (Packages) and delivers a stainless steel pipework system that supplies pressurized water to the Tokamak.

## Major Milestone Achieved:

- We have successfully completed **Task 1A** - the first stage in the development of the **Blanket Cooling Manifold (BCM)** prototype for ITER - the International Thermonuclear Experimental Reactor

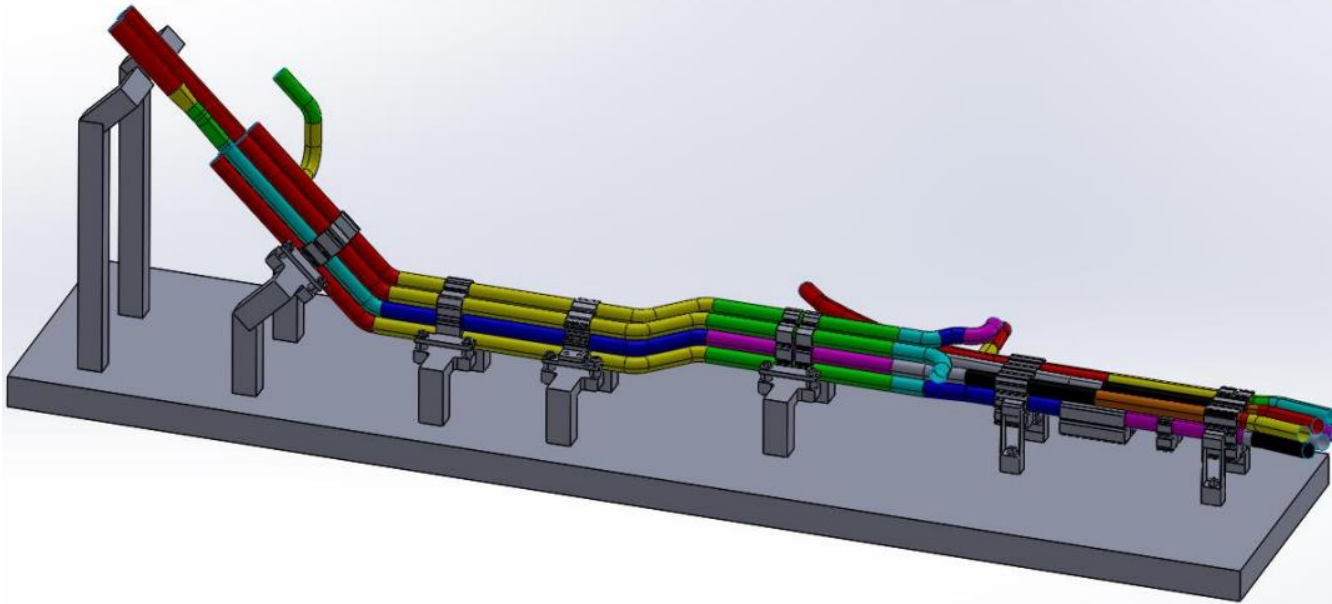
## Our Unique Role:

- We are proud to be:
  - One of only two companies worldwide participating at this stage,
  - The only company in Poland and Central & Eastern Europe involved in this phase of the project.



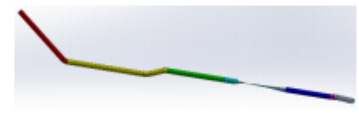




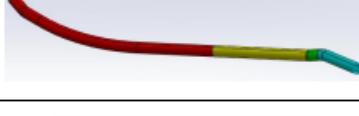


Timeframe: 2023 - 2031

# ITER BCM Project - Task 1A (pipes)



One of the main requirements:

- Made with 316L / Alloy 660 / Alloy 718
- Tolerances for full bundel +/- 2,5 mm
- HV <300
- Elctric resistance >1kΩ / (500 V)

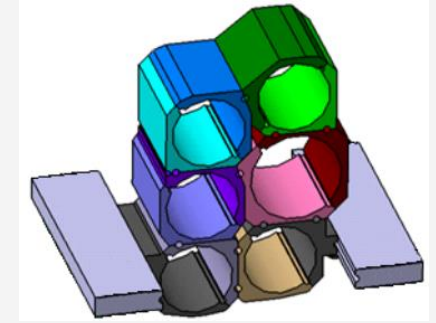
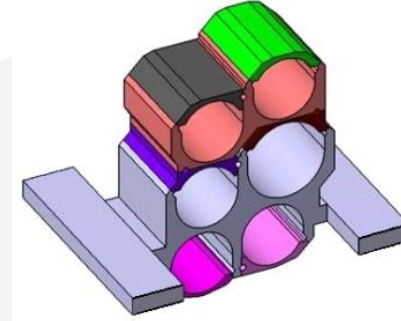
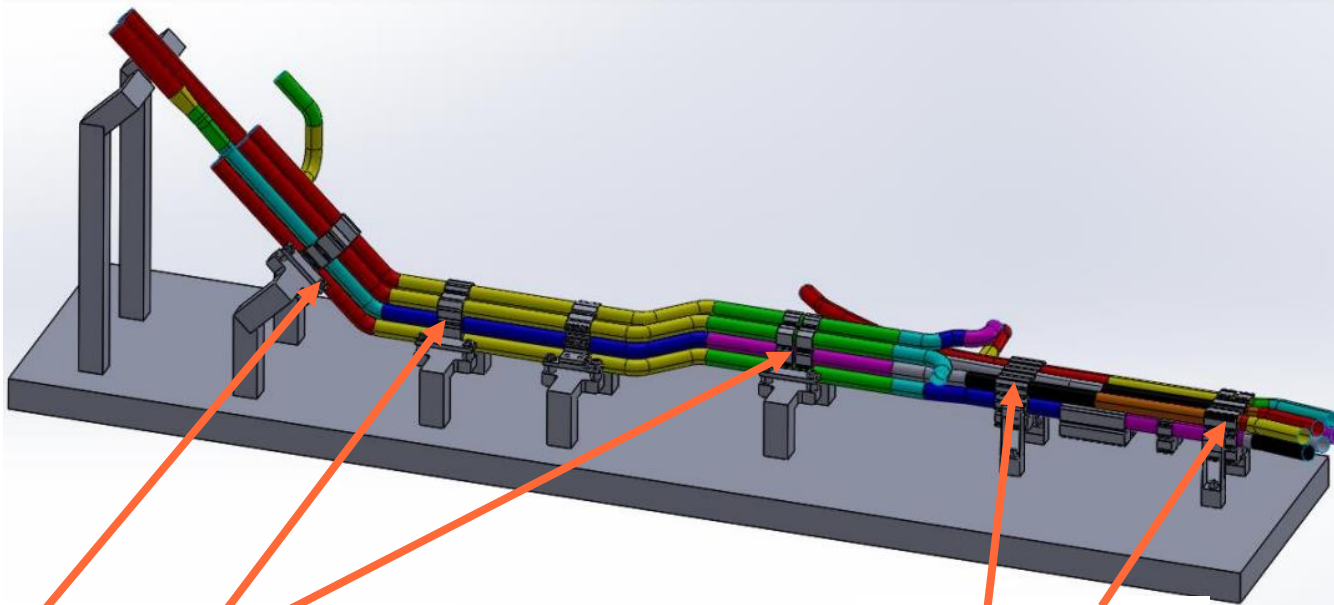
Pipe Number	Number of Pipe Sections	Number of Welds	Number of Bends	3-D Model of Pipe Section
1	7	6	5	
2	8	7	7	
3 and 7	10	9	7	
4	11	10	8	
5	6	5	6	
6	4	3	4	
8	4	3	4	
9	6	5	5	

Totals      56      48      46

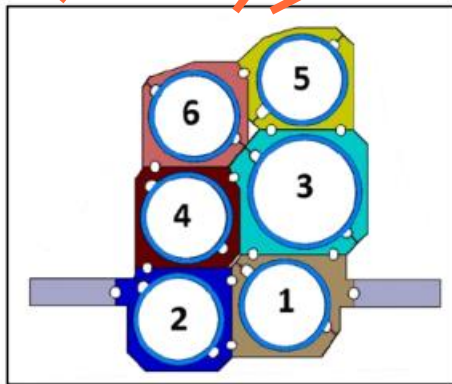


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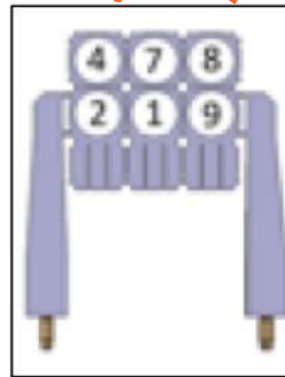
# ITER BCM Project - Task 1A (support)



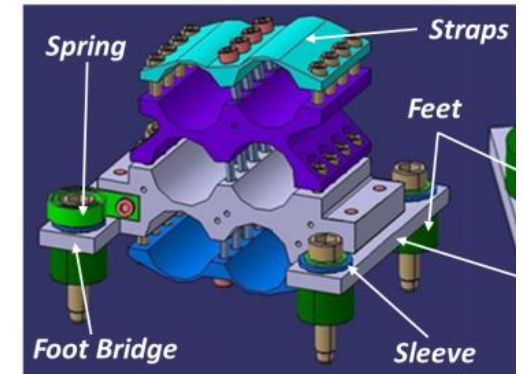
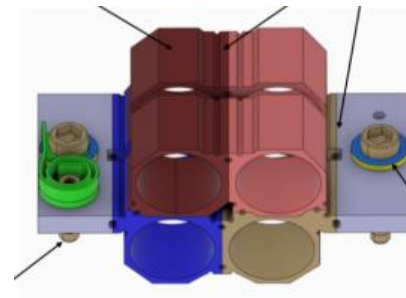
	HRP	Welded	Bolted	Total
Types	6	5	1	12
Quantity	21	23	1 set made with 4 pcs	(48)



Pipe Numbers for Inlet Bundle



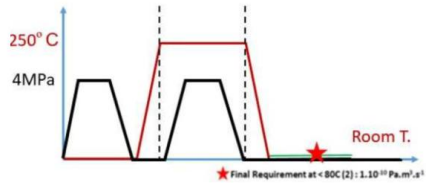
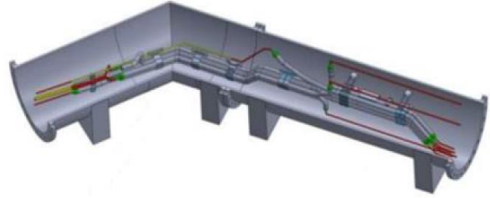
Pipe Numbers for Outlet Bundle





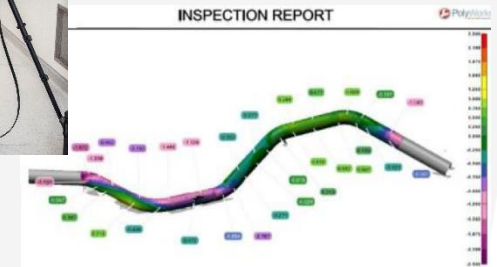
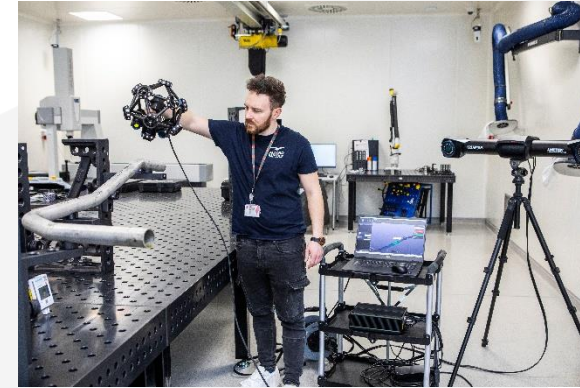
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# ITER BCM Project - Task 1 (DT & NDT)



As a part of NDT for TASK 1 we did:

- □ Mechanical Tests
- □ Visual Inspection
- □ Ultrasonic Testing
- □ Electronic Isolation Test
- □ Liquid Dye-Pentrant Test
- □ Radiographic Testing
- □ Hydraulic Leak Test
- □ Helium Leak Test - in own chamber.

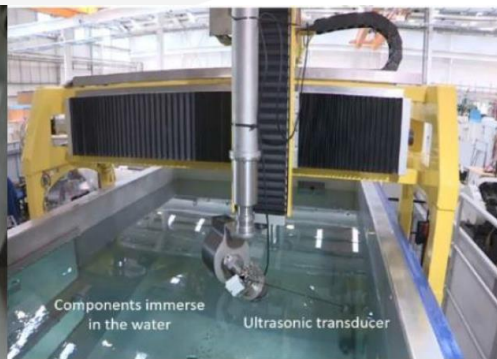
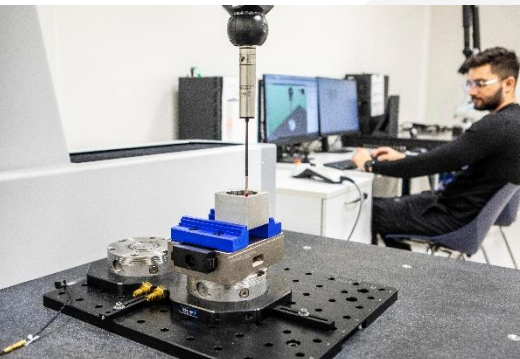


Requirments for coating applied by D-Gun :

- NiAl or Ni (99%+): 100 +/- 50  $\mu\text{m}$  thickness
- Al<sub>2</sub>O<sub>3</sub> (99%+): 300  $\mu\text{m}$  thickness nominal
- Cu (99,7%+): min. 0.6 mm applied

Geometry measurement:

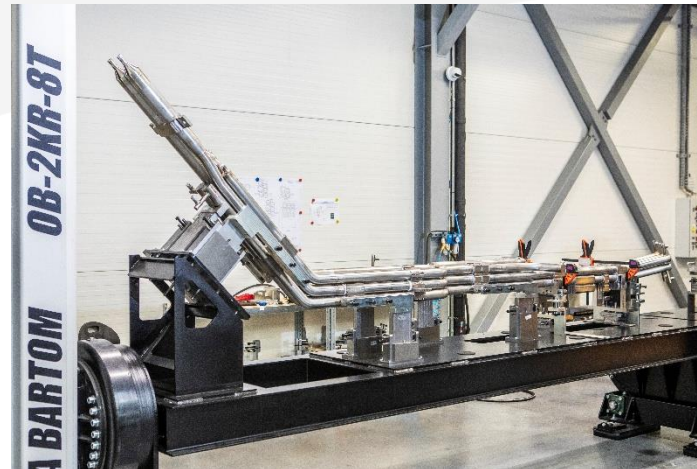
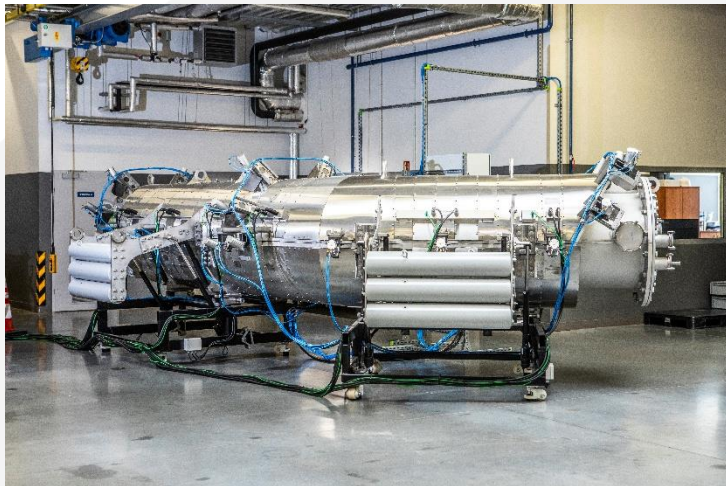
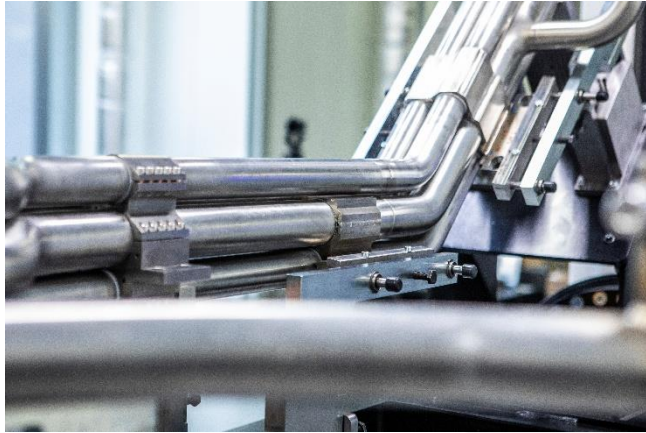
- ALTERA S-type (CMM)
- Laser tracer API OmniTrack 2 Core
- Nikon MCx25+ Manual Coordinate Measuring Arm
- Creaform MetraSCAN BLACK+
- PolyWorks





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# ITER BCM Project - Task 1A - finalized





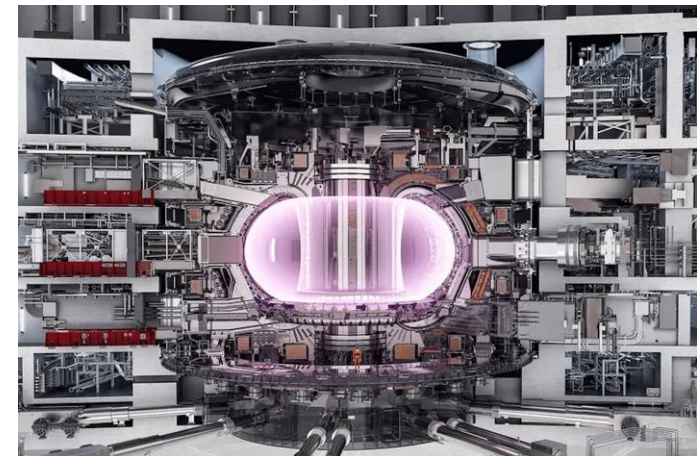
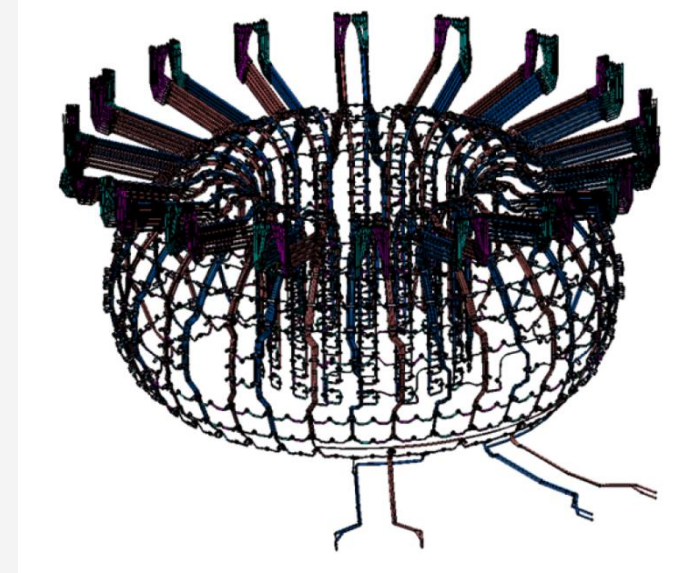
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# ITER BCM Project -> What is Next?

- **Task 1B:**
  - Continuation of the conceptual phase,
  - Implementation of improved manufacturing processes,
  - Development of more precise models for the cooling system based on experience gained from Task 1A.
- **Task 3:**
  - **We will deliver 2.5 km of bent tubular components,**
  - These will form an integral part of the future fusion reactor's cooling system.

## Why It Matters:

- Our contribution supports the development of the world's largest fusion experiment and marks a step forward in advancing **clean, sustainable energy for the future.**





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Thank you for  
your time !