framatome

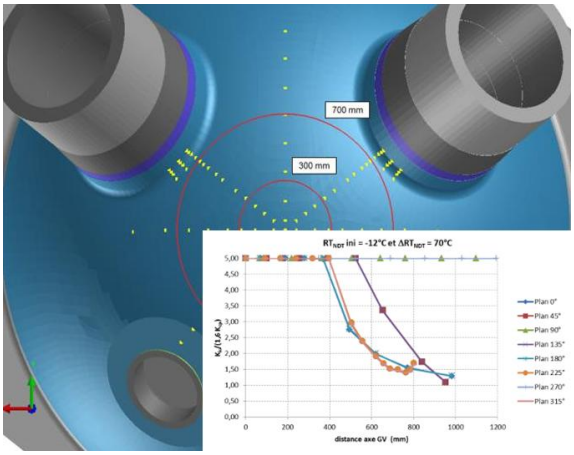
Mechanical calculations tool development

Qualified mechanical calculation tools for complex components and structures

Framatome Center of Excellence for Calculations to serve Customers worldwide

Challenge

Demonstration of compliance with technical and regulatory requirements for components and mechanical structures in various industries de to qualified engineering tools.



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Solution

- Development of post processors to analyze stress according to RCC-M, ASME or RSE-M codes in domains such as fast fracture analysis, fatigue analysis, multi perforated structure analysis, ...
- Qualification of the tools according to the most stringent regulation rules : ESPN, EN, ASME ...
- Training pack for end users
- Development of toolkit based on SAOME_MECA platform to solve mechanical problems : various levels of support are proposed depending on the customer's needs
- Implementation of calculation suit to chain calculations
- Solutions applicable to a wide range of industries (Oil & Gas, Energy, Aerospace, Chemical, Pharmaceutical, Transportation, Special Tooling, Ship Building Industry and Navy, Defense)

Tools

- SALOME_MECA & CODE_ASTER
- Python
- ANSYS
- SYSTUS
- SYSPIPE, PIPESTRESS

References

- Capacity to fit the global market (South Africa, UK, China, US)
- Justification of nuclear primary loop components including pressurized equipement
- EDF large scale modernization program (extension of 1 300 MWe nuclear reactor's service lifetime)

Customer benefits

- Safety and Quality Conformity
- Training sessions with experts in analysis tools, regulations and mechanical analyses
- Agile solutions to solve problems

Your performance
is **our** everyday **commitment**

Key figures

45 years of expertise in mechanical analyses and software development

20% of the team made up of experts having a PhD degree

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