Novel technologies to boost the shipyard industry

3D Classification PROJECT

MOREAU Hugues **BUREAU VERITAS Marine & Offshore**

ORGANIZED BY THE EU HORIZON 2020 PROJECTS:

FIBRE4YARDS SHIPYARD FOR THE FUTURE

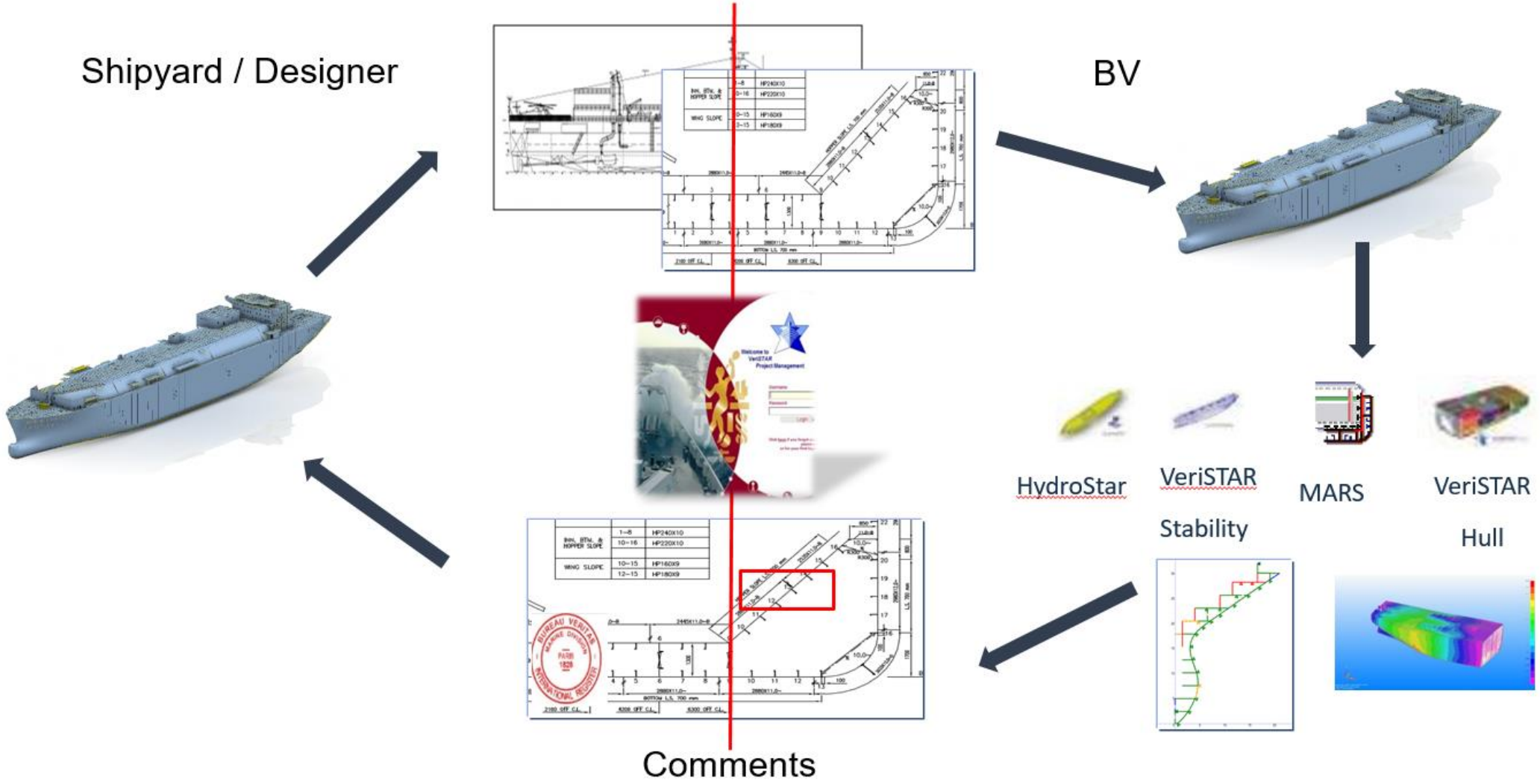
RESURGAM

MARI4YARD MARI4ALLIANCE

30th and 31st May 2023, RTD Innovation Dock, Rotterdam

These projects have received funding from the European Union's Horizon 2020 research and innovation programme under grant agreements n° 101006860 (FIBRE4YARDS), n° 101007005 (RESURGAM), and n° 101006798 (Mari4_YARD).

Current situation of classification process



3D Classification

Objective

Design approval based on the 3D digital mock-up provided by the designer:

Benefits

Use numerical model to avoid generating 2D drawings

reduce shipyard workload

Numerical model can be used to generate calculation databases **reduce calculation time**

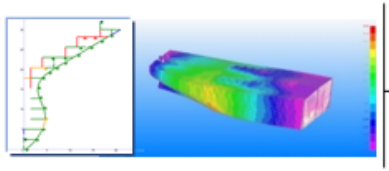
Speed up the process of design verification

No more inconsistency due to different revisions of drawings improve **quality**

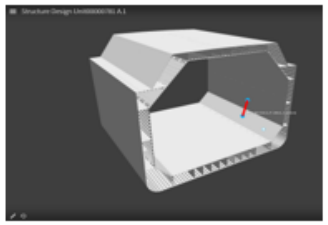
Enhance collaboration and improve customer experience

Structure of the solution

Independent calculations

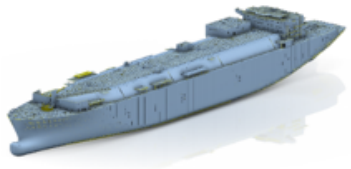


Classification package analysis

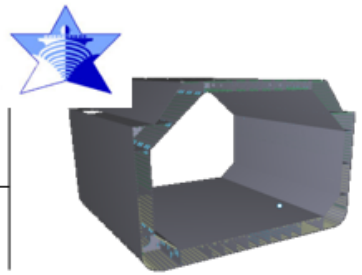


Exchange and traceability via VeriSTAR Project Management

Classification package creation



Approval comments creation and exchange



Viewing of the reviewed classification package In VPM

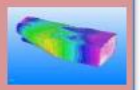
: Shipyard

: Bureau Veritas

Structure of the solution / 2 main pillars

Web Collaborative Platform
(exchange data / collaboration)

BV independent calculations
(**only for BV internal use**)



VeriSTAR Project Management

To manage the exchange of the 3D classification package and the comments

3D Web Viewer (SmartShape)

To display\analyse\compare the 3D Model and the associated comments

Collaborative platform

SMARTSHAPE

Automatic calculation model generation

Two solutions according to the model format:

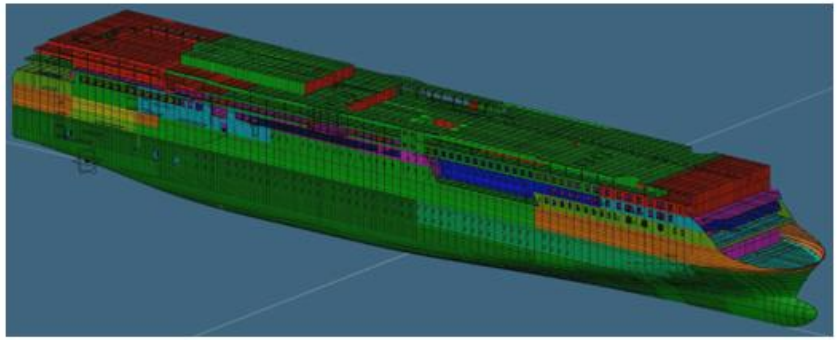
- NAPA Designer -> OCX format
- 3DExperience -> 3dxml format

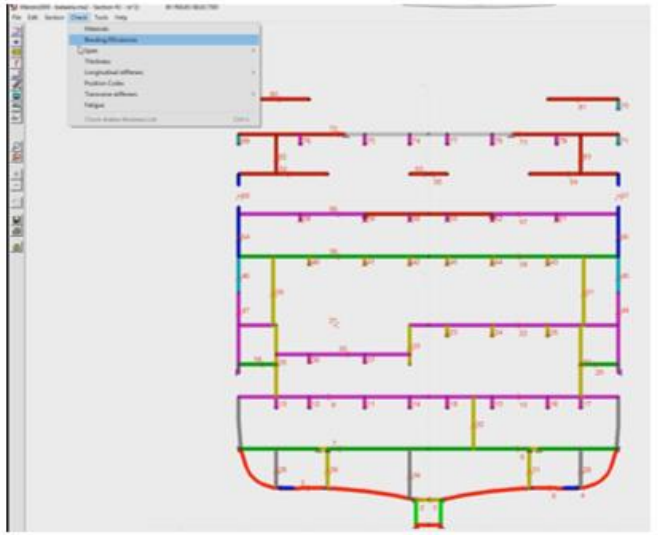
BV Structural Tools

VeriSTAR Hull and MARS

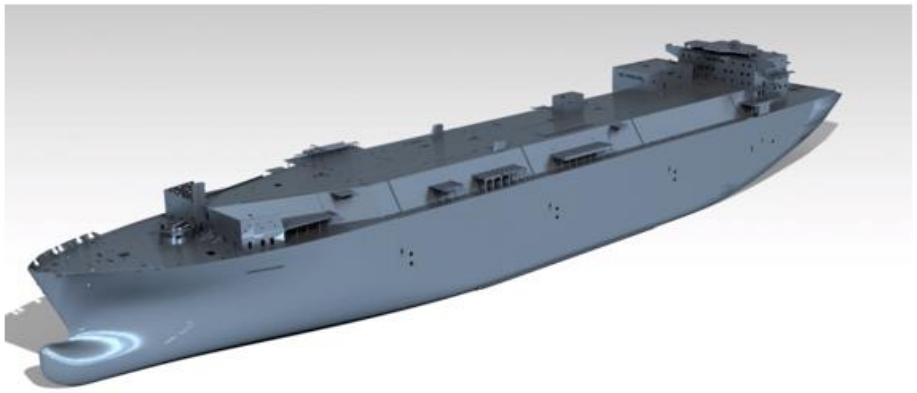
3D Experience / BV internal use

Interface 3D Experience / NAPA -> MARS:





Interface 3D Experience / NAPA -> VeriSTAR Hull:



Summary

- **BV already delivered the FIRST 3D CLASSIFICATION for NAVAL GROUP Frigate in 2019.**

- **BV delivered the FIRST 3D CLASSIFICATION using OCX format for DAMEN in 2021.**

THANKS
FOR YOUR ATTENTION

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