Korean Register's 3D Viewer

Open Class 3D Exchange Consortium

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Introduction

- Korean Register(KR) develops a 3D model-based structural design approval system.
- It supports 3D OCX format.

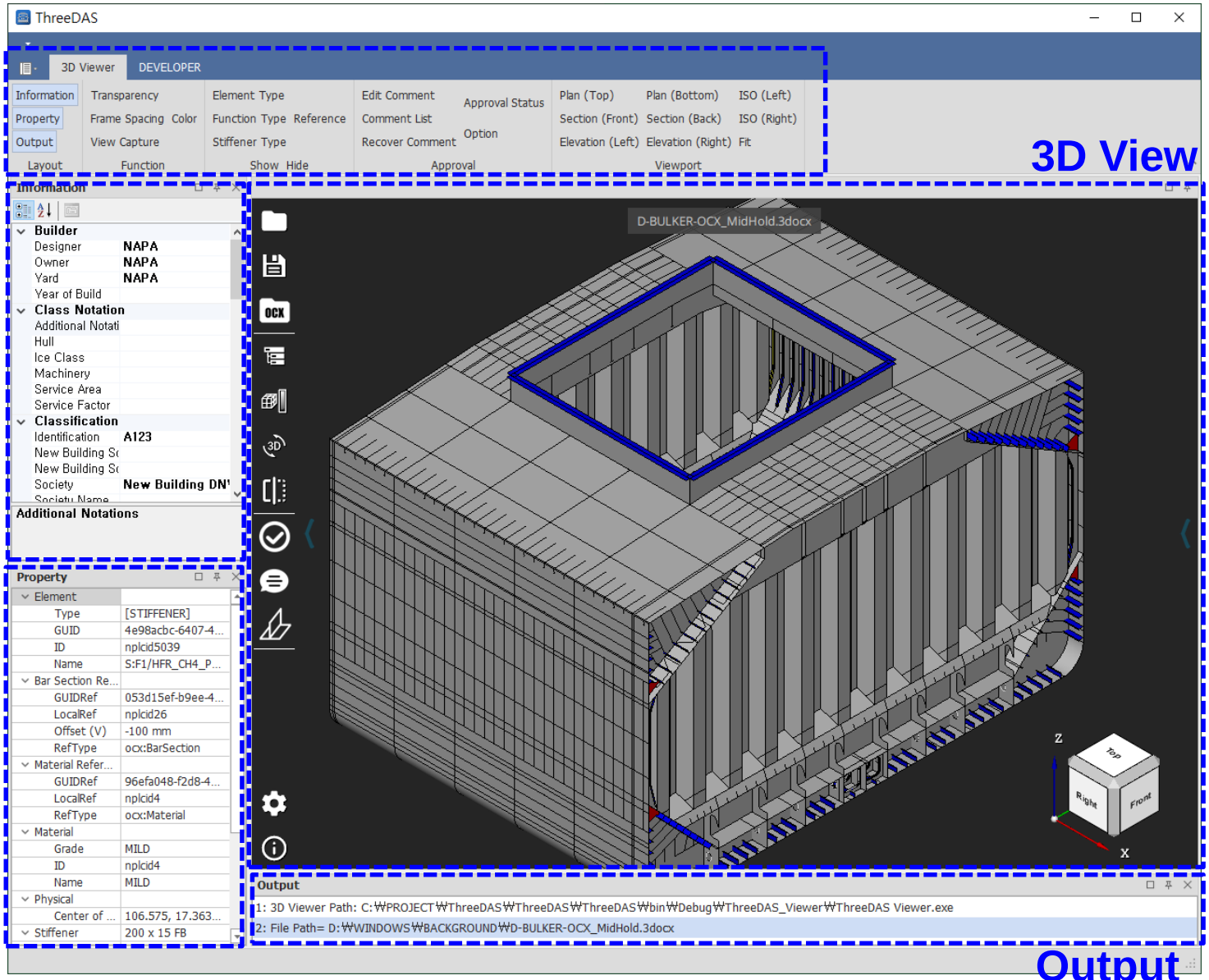
- KR was a 3rd party member during OCX development under APPROVED JIP.
- KR want to be a full member of OCX Consortium.

- Recently, KR is collaborating with Korean shipyard to implement and stabilize OCX interface.

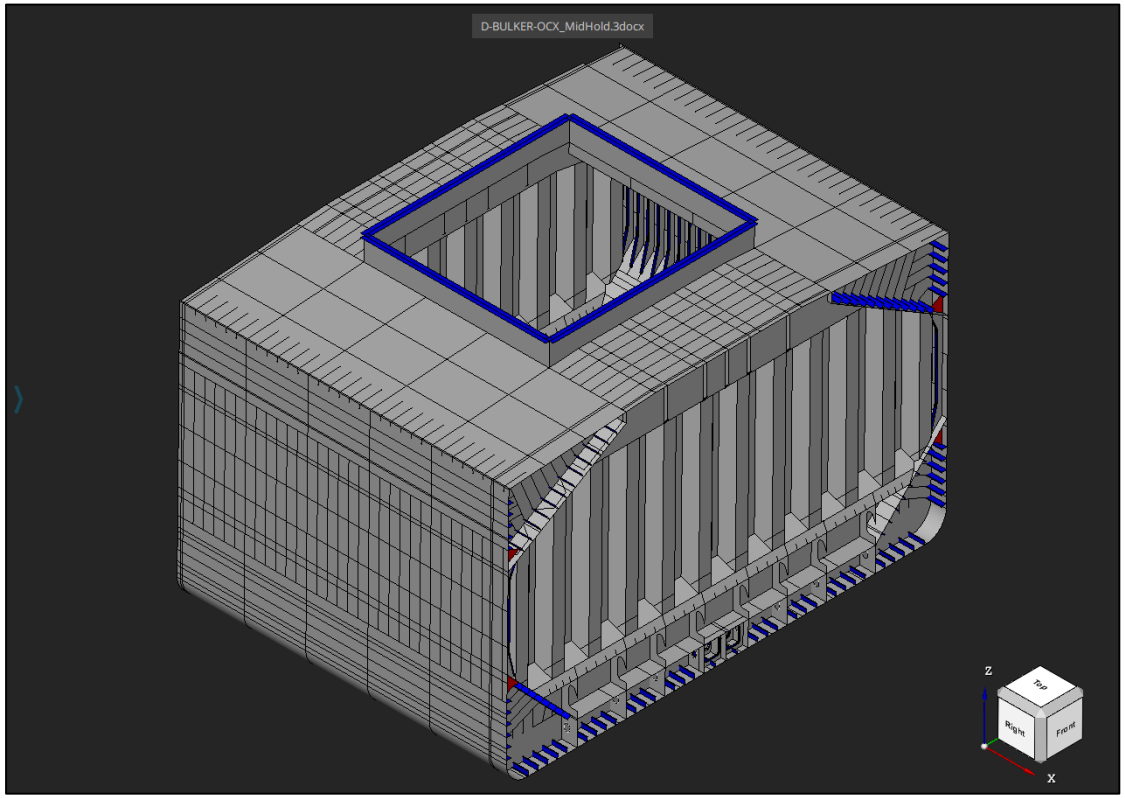
3D Viewer

of Korean Regiser

3D Viewer Layout

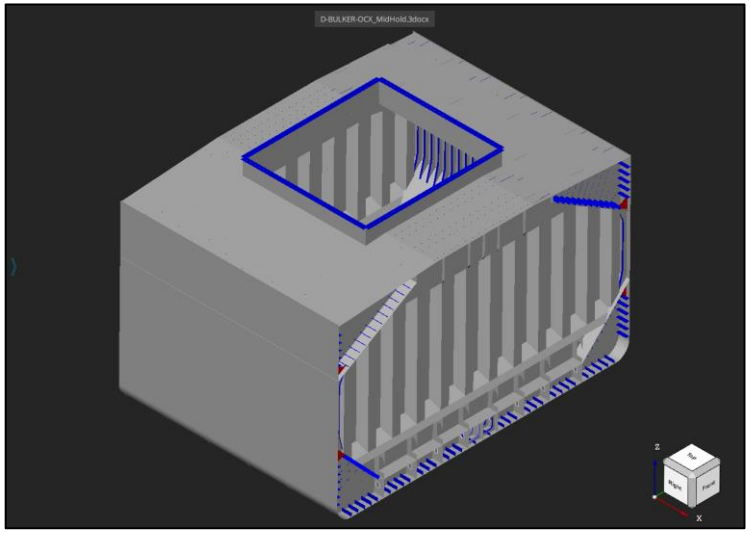


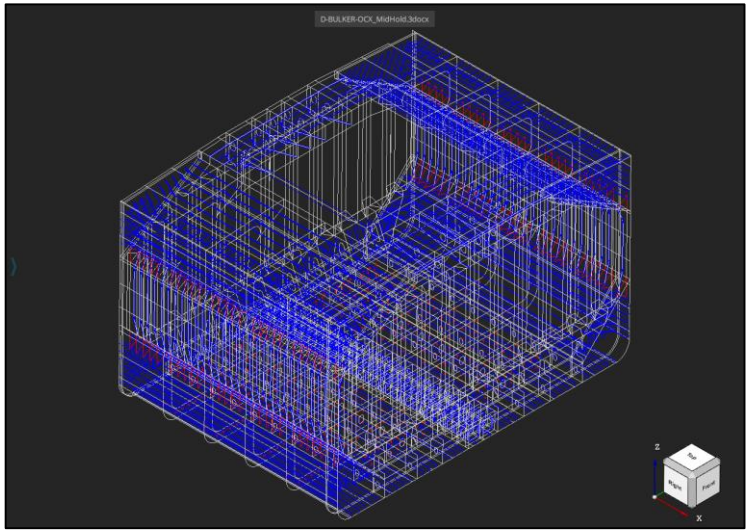
- Display Mode (Wireframe, Shading, Shading with Edges)



Shading with Edges

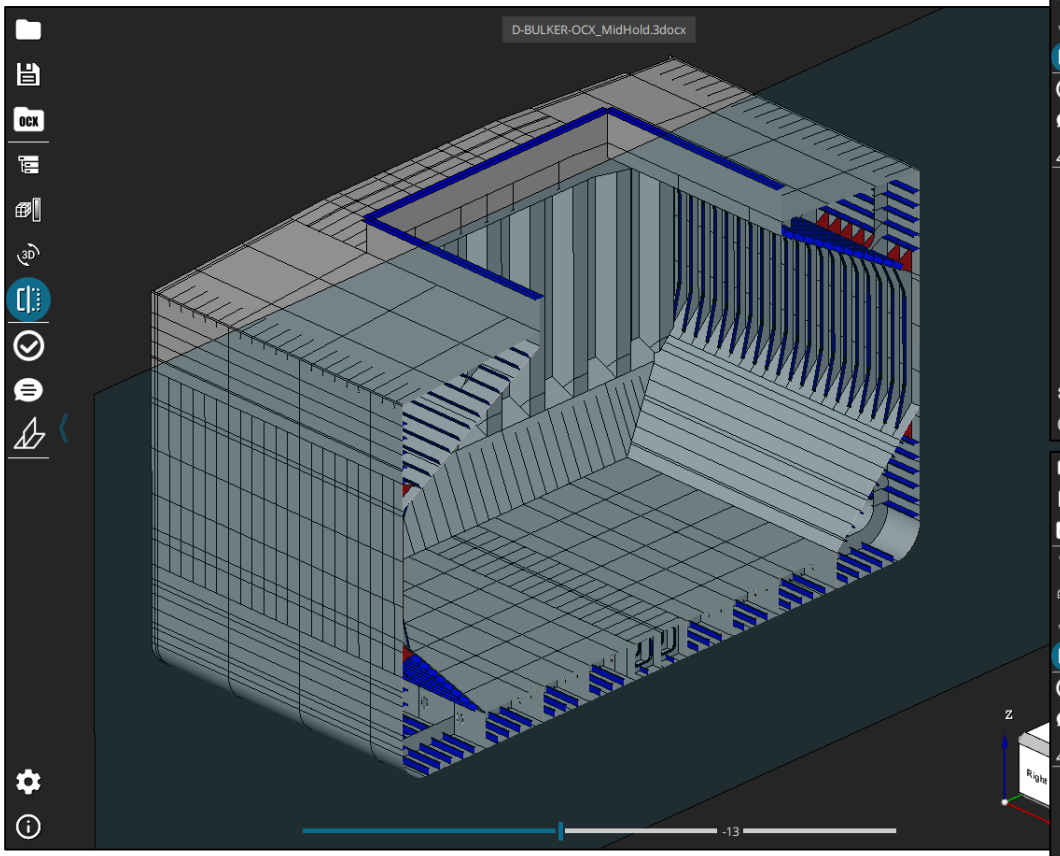
Shading

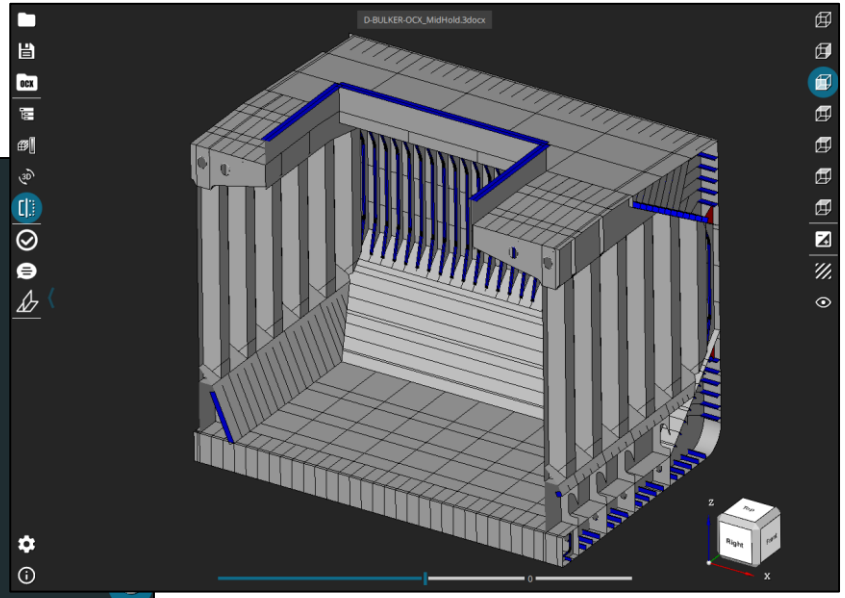


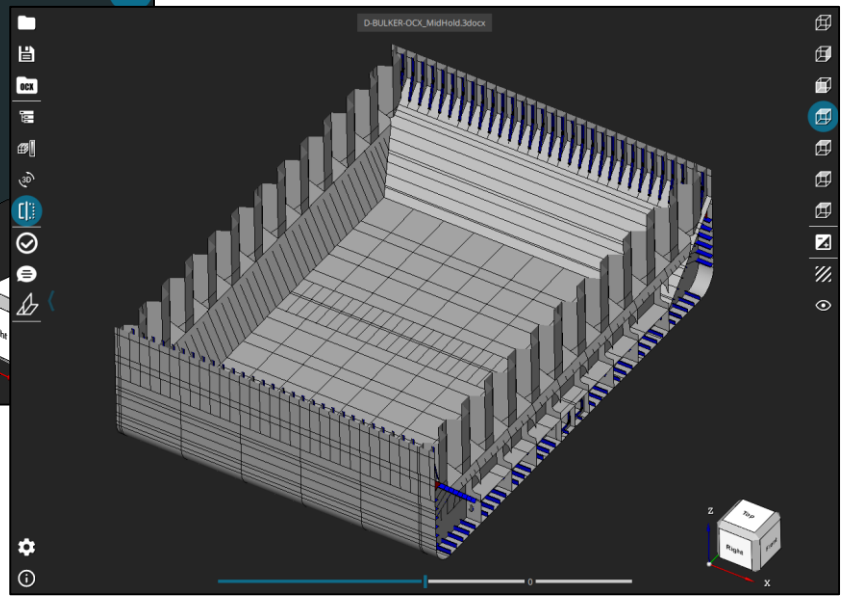


Wireframe

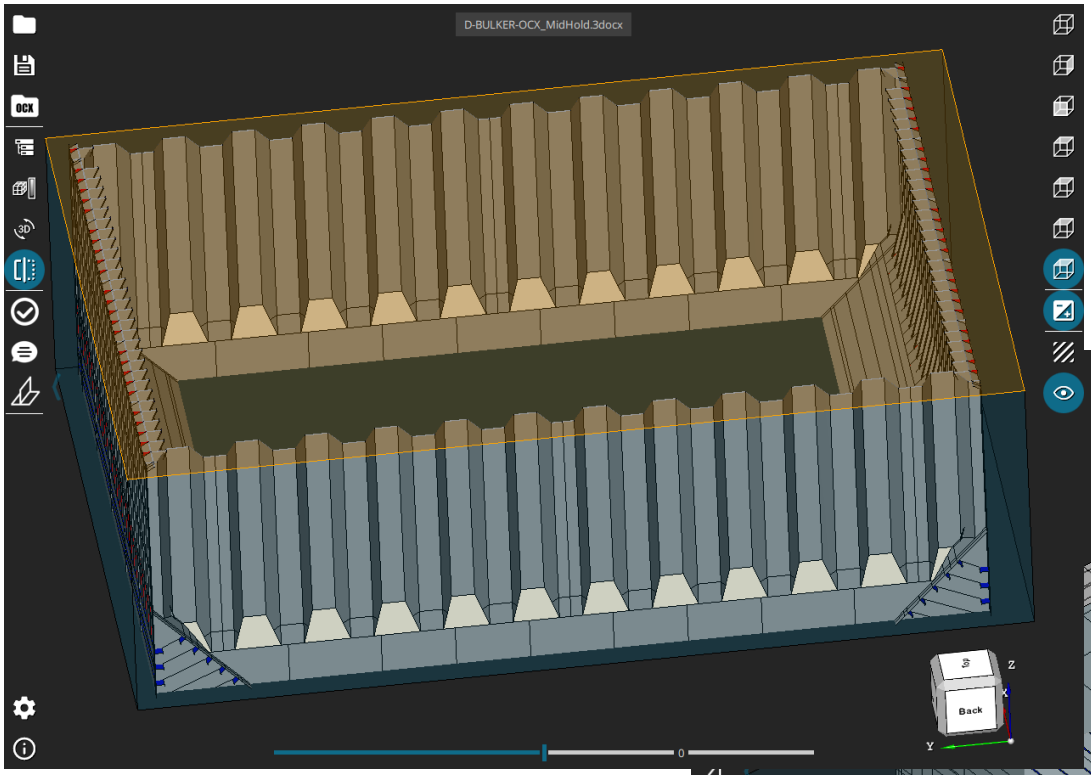
Clipping by Single Direction



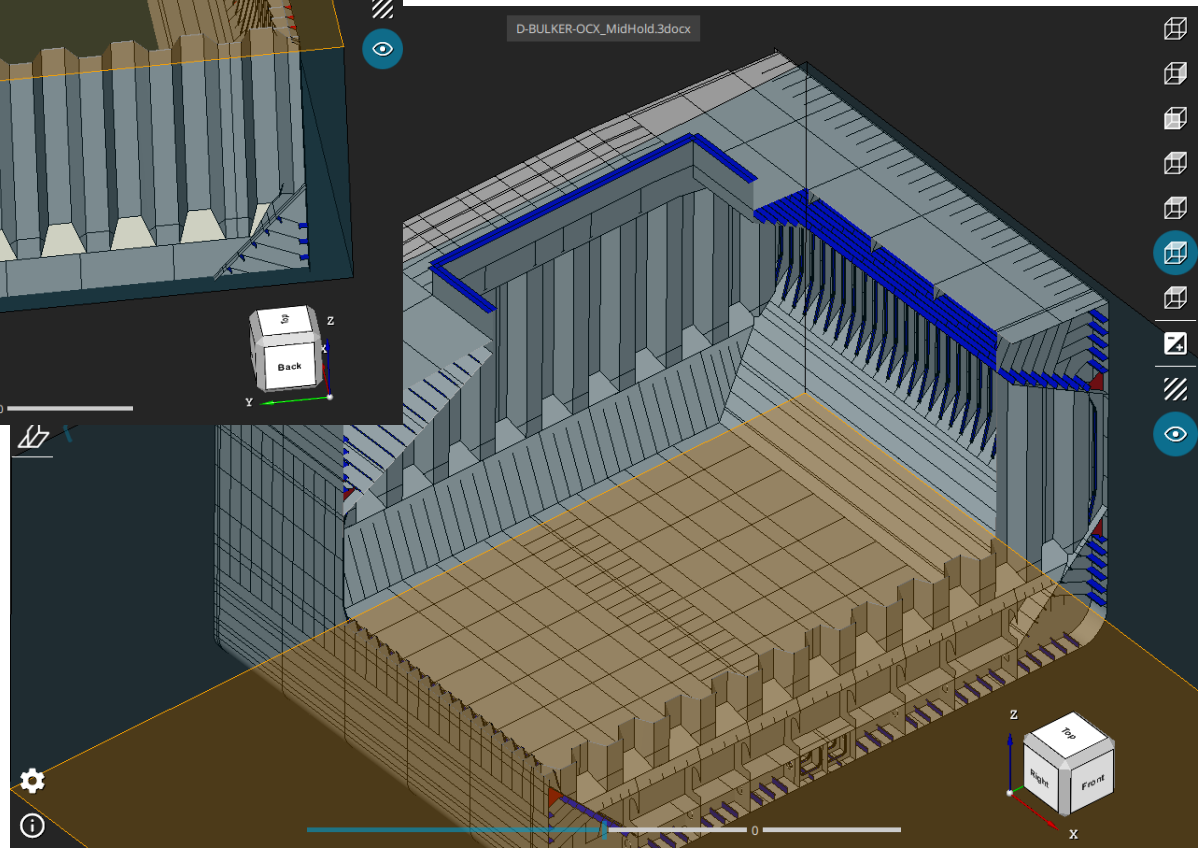




Clipping by Multi-Direction

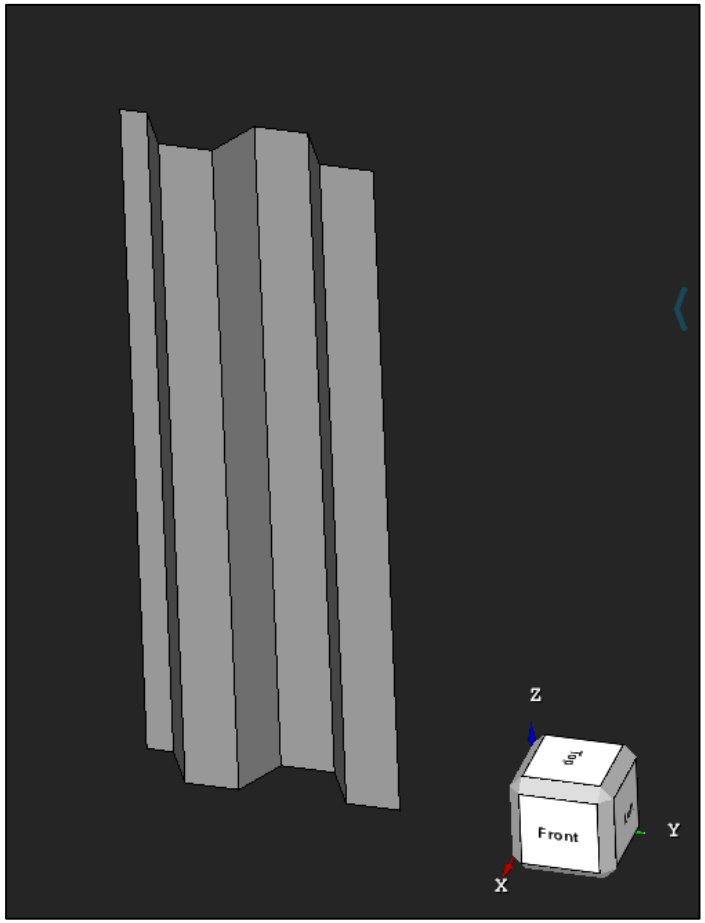


by Box

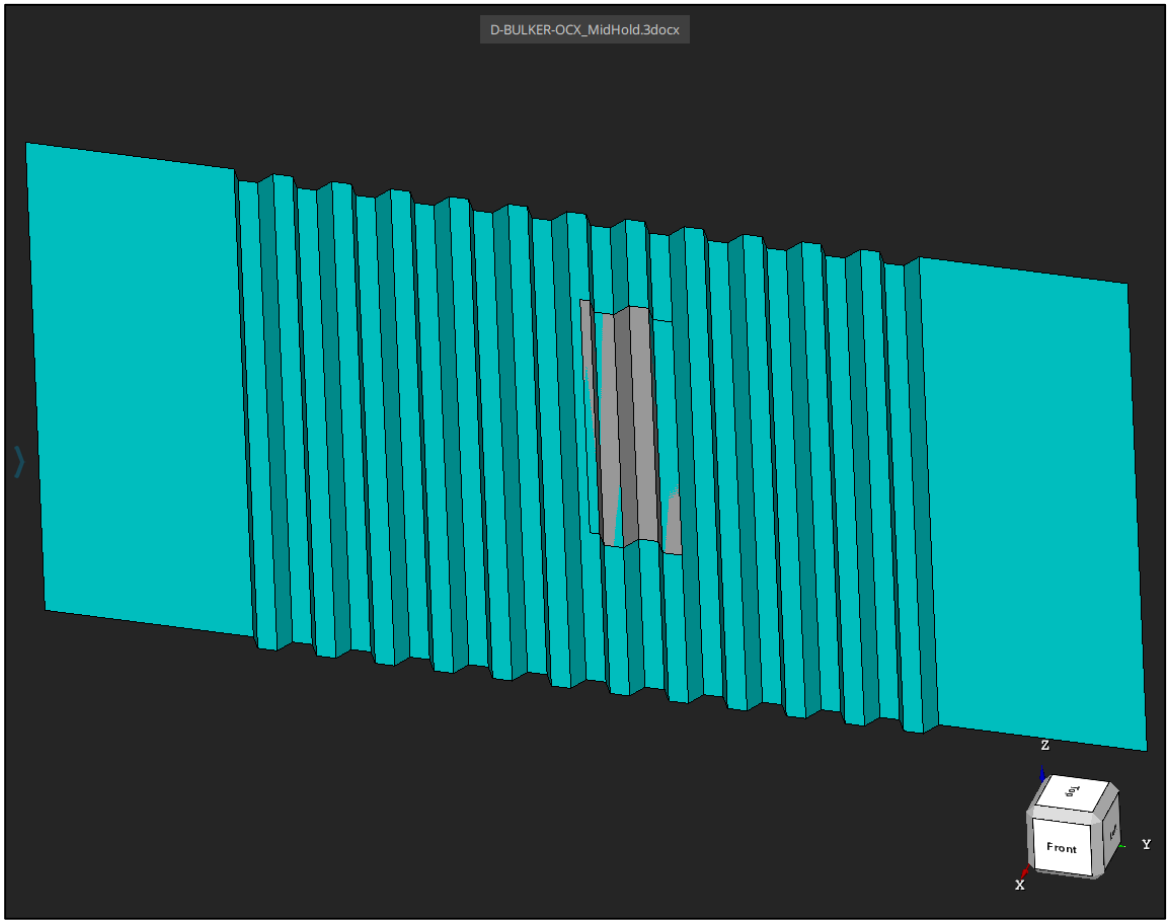


by 3 Planes

Corrugation Bulkhead

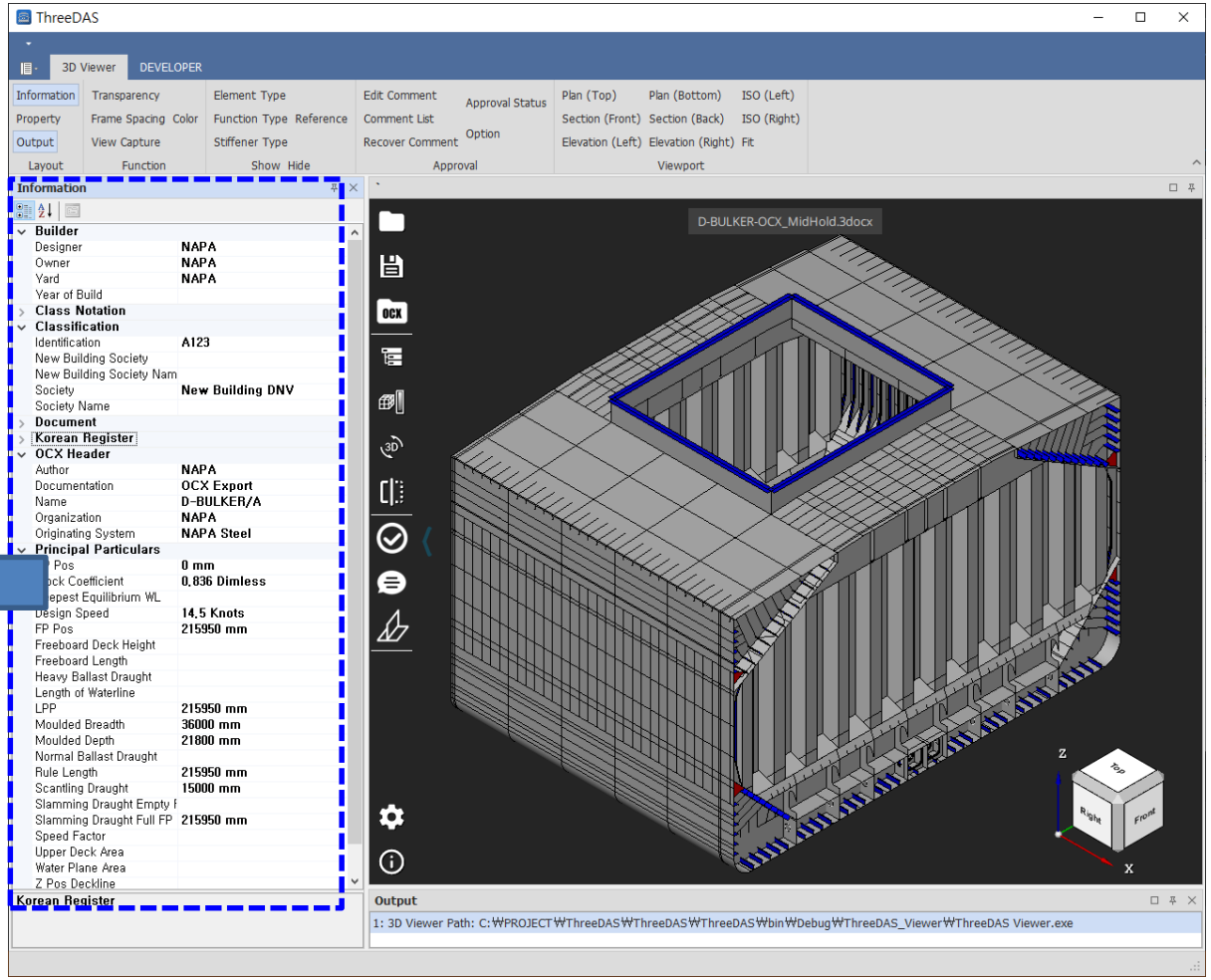


Reference Surface



Information Window

OCX Classification	
Society	DNV
Society Name	
New Building Society	
New Building Society Na	
Identification	A123
OCX Header	
Name	D-BULKER/A
Author	NAPA
Organization	NAPA
Originating System	NAPA Steel
Documentation	OCX Export
OCX Principal Particulars	
LPP	215.95 m
Rule Length	215.95 m
Block Coefficient	0.836
FP Pos	215.95 m
Moulded Breadth	36 m
Moulded Depth	21.8 m
Scantling Draught	15 m
Design Speed	14.5 Knots
Freeboard Length	



Property Window

Property	
Element	
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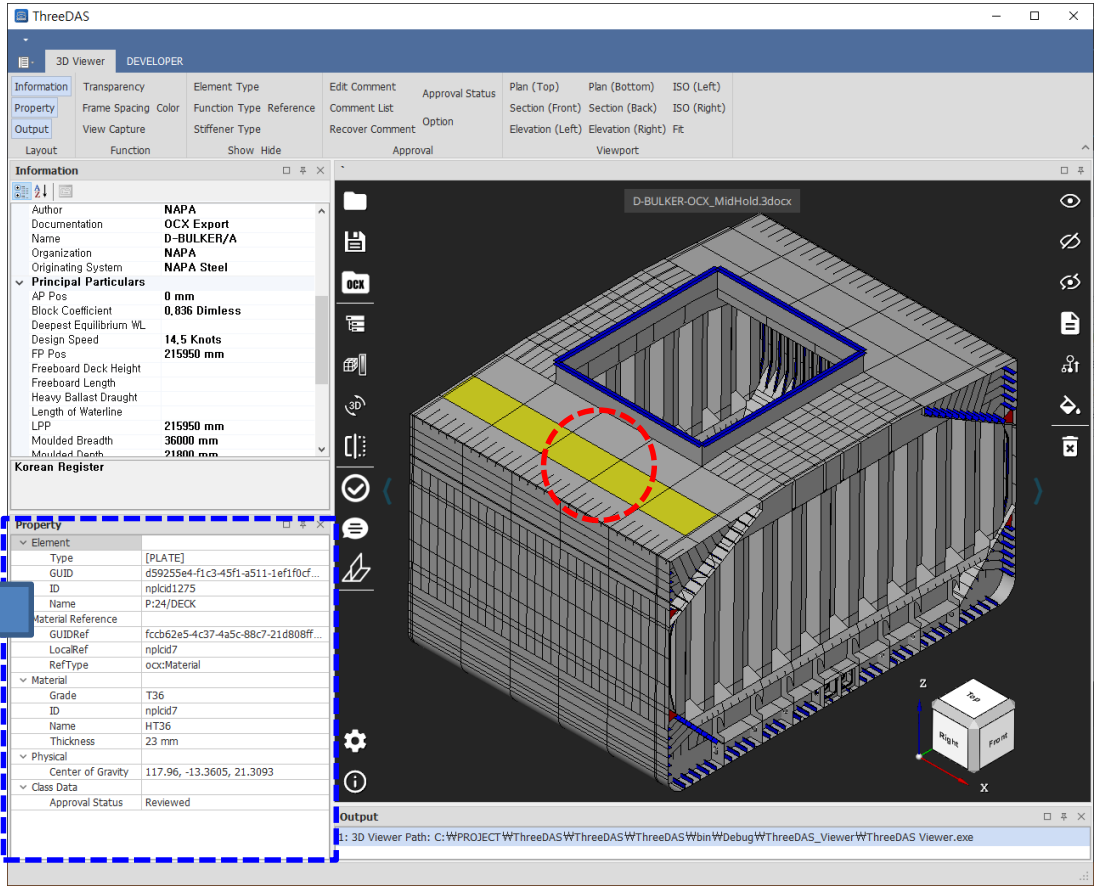
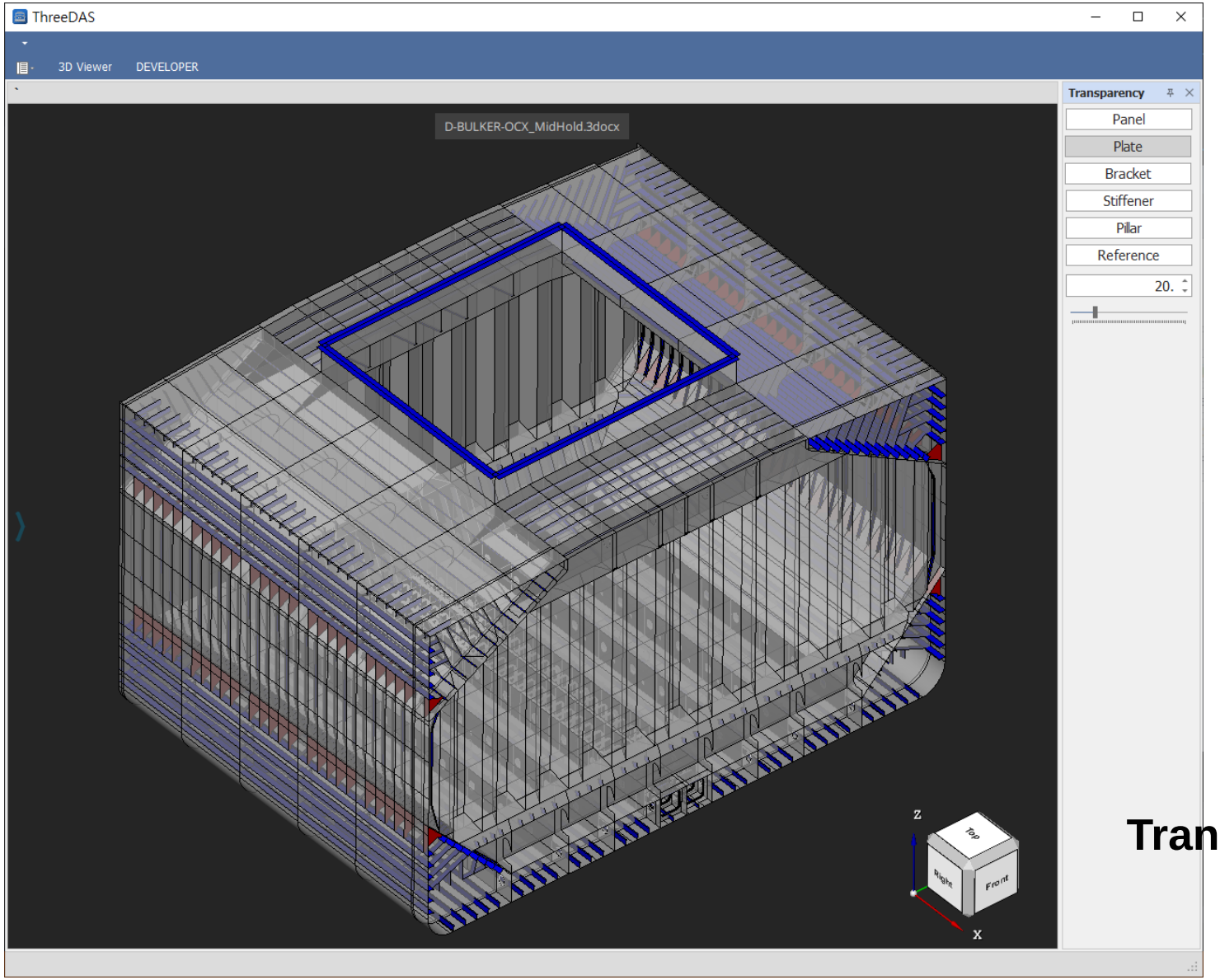
ID	nplcid1275
Name	P:24/DECK
Material Reference	
GUIDRef	fccb62e5-4c37-4a5c-88c7-21d8
LocalRef	nplcid7
RefType	ocx:Material
Material	
Grade	T36
ID	nplcid7
Name	HT36
Thickness	23 mm
Physical	
Center of Gravity	117.96, -13.3605, 21.3093
Class Data	
Approval Status	Reviewed

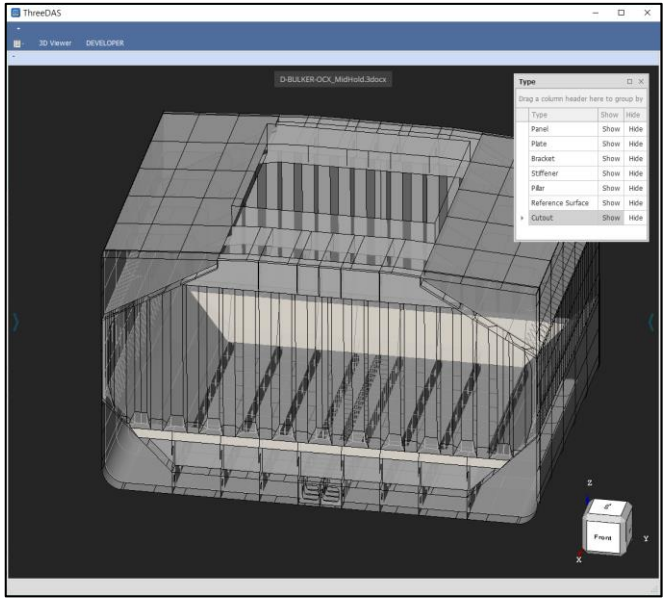


Transparency



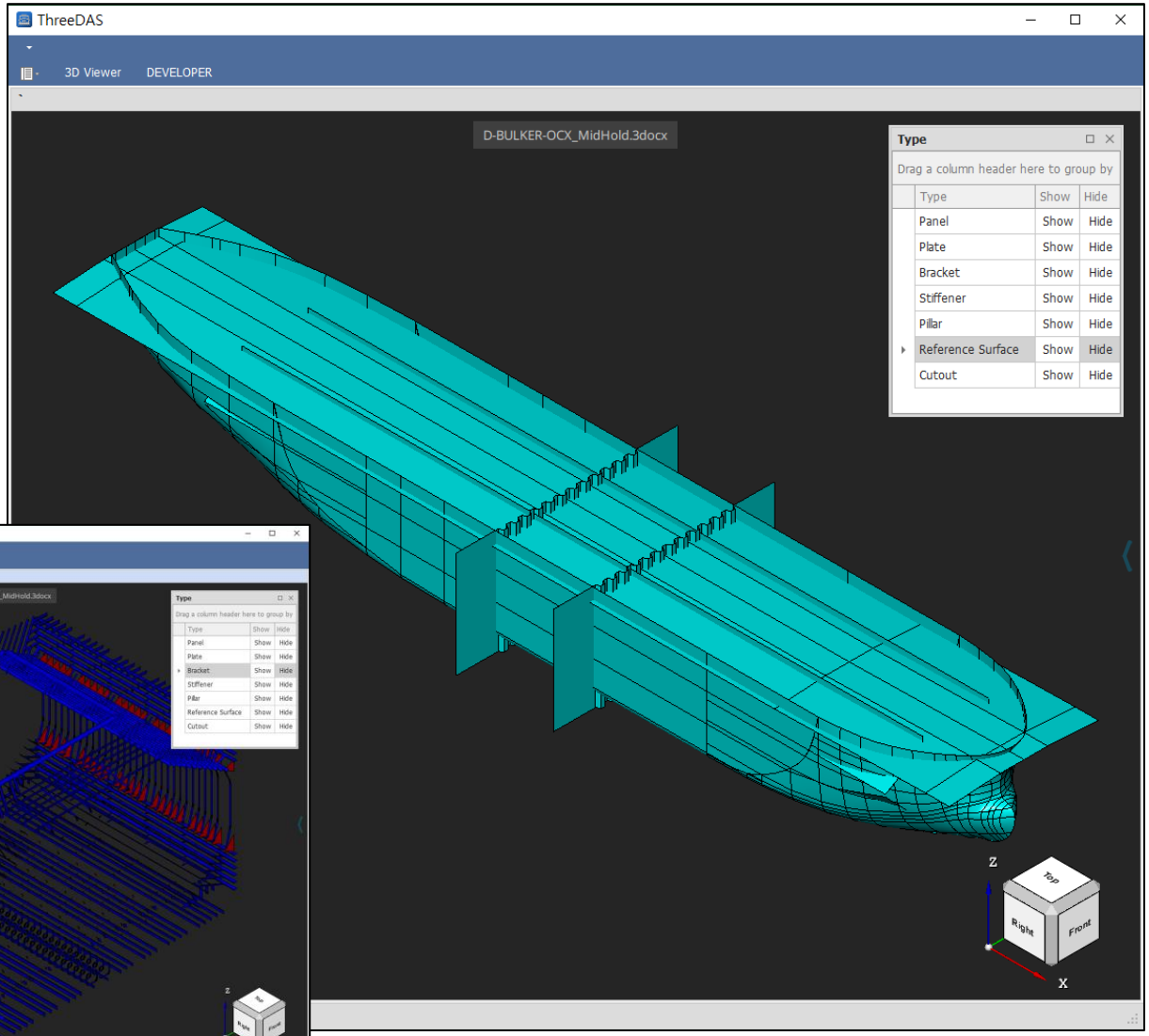
Transparency 20% to Plates

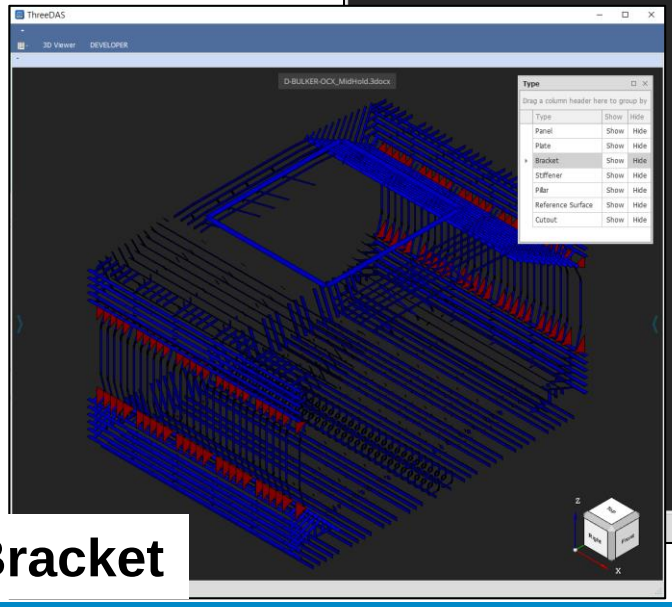
Show & Hide by Element Type



Plate

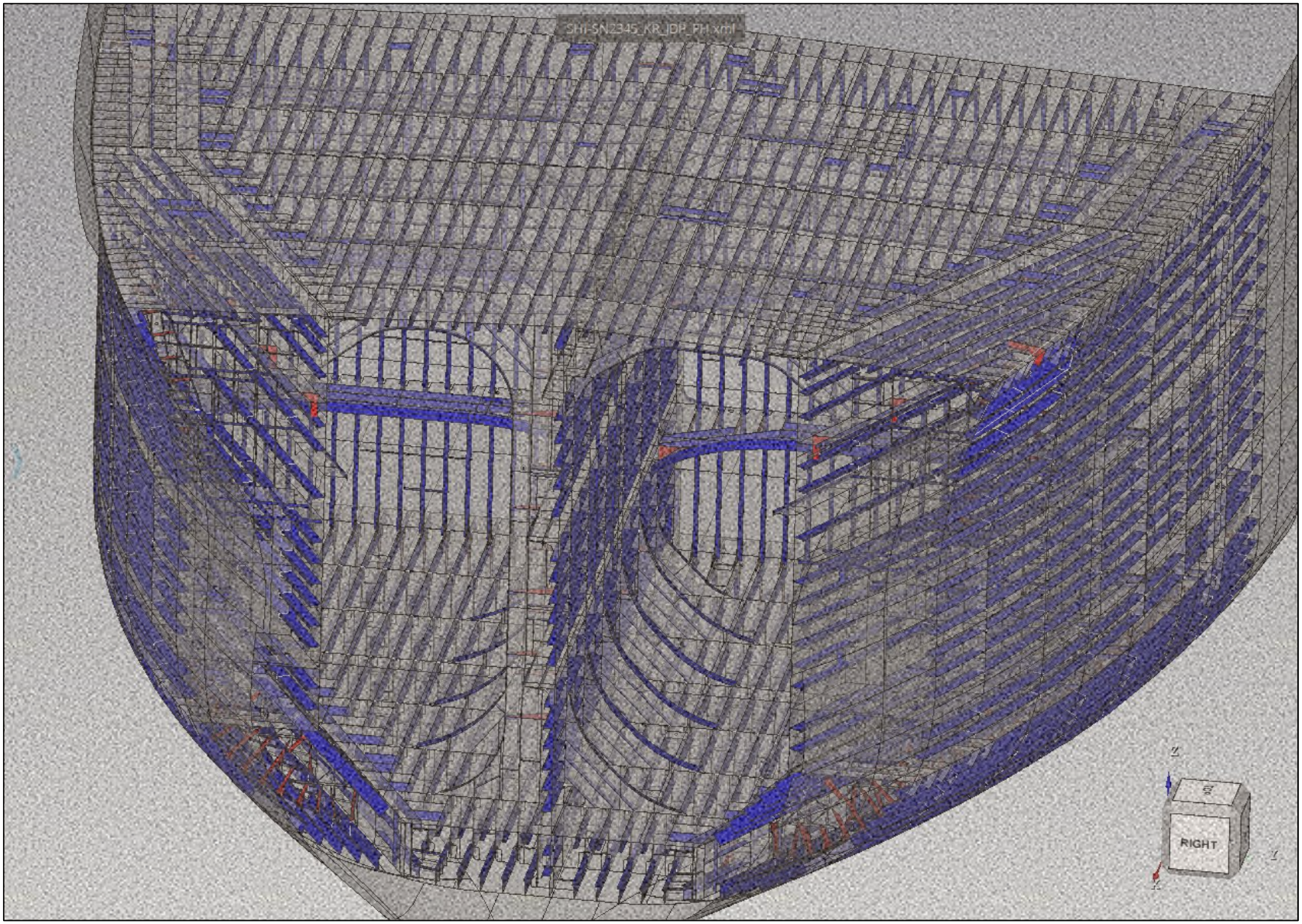
Reference Surface





Stiffener & Bracket

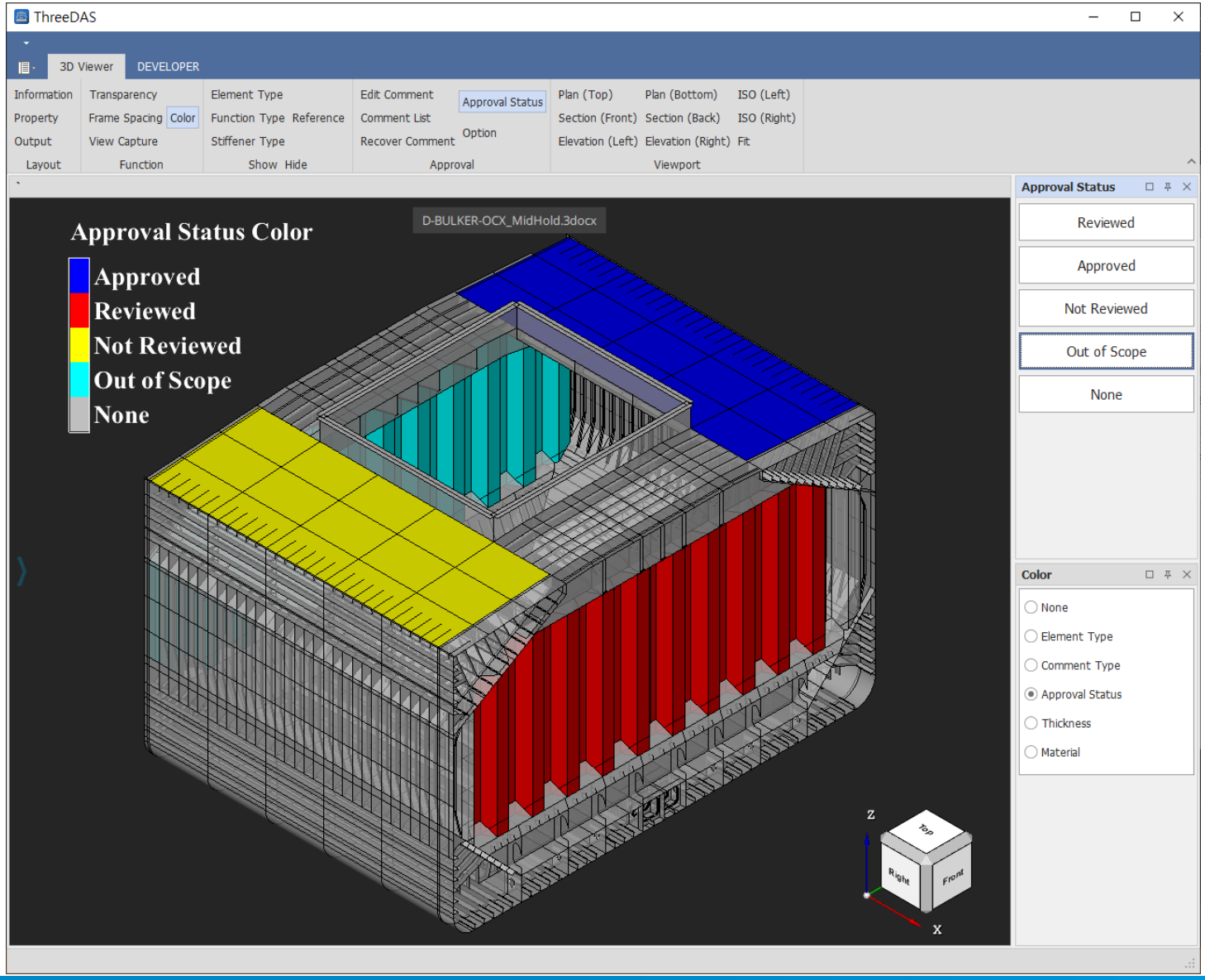
Shipyard 3D OCX Model

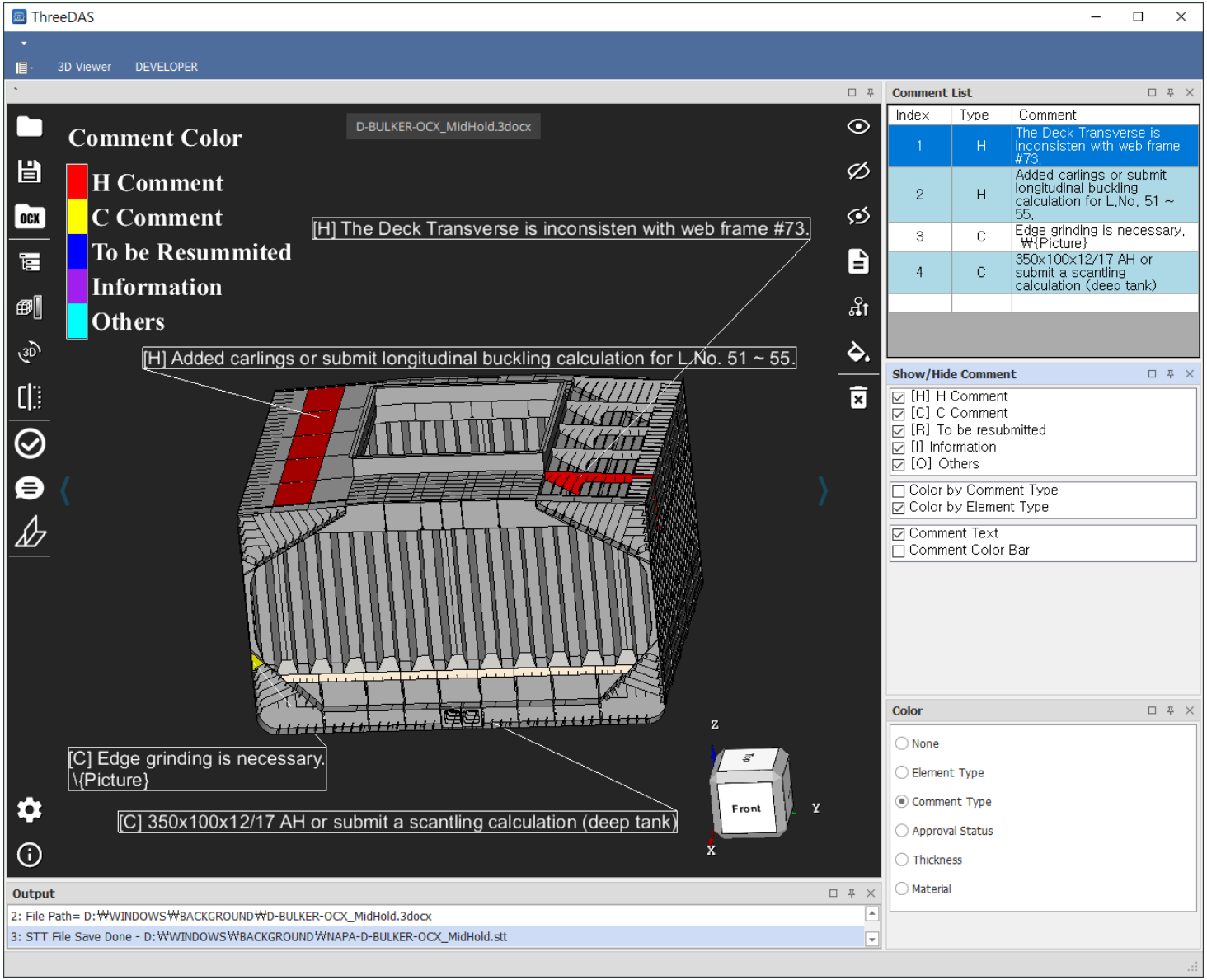


Functions

for Approval Engineer

Approval Status




ThreeDAS
3D Viewer
DEVELOPER
D-BULKER-OCX_MidHold.3docx
Comment Color
H Comment
C Comment
To be Resummited
Information
Others
[H] The Deck Transverse is inconsisten with web frame #73.
[H] Added carlings or submit longitudinal buckling calculation for L.No. 51 ~ 55.
[C] Edge grinding is necessary.
\{Picture}
[C] 350x100x12/17 AH or submit a scantling calculation (deep tank)
Front
Comment List
Index
Type
Comment
1
H
The Deck Transverse is inconsisten with web frame #73.
2
H
Added carlings or submit longitudinal buckling calculation for L.No. 51 ~ 55.
3
C
Edge grinding is necessary. \{Picture}
4
C
350x100x12/17 AH or submit a scantling calculation (deep tank)
Show/Hide Comment
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[C] C Comment
[R] To be resubmitted
[I] Information
[O] Others
Color by Comment Type
Color by Element Type
Comment Text
Comment Color Bar
Color
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Element Type
Comment Type
Approval Status
Thickness
Material
Output
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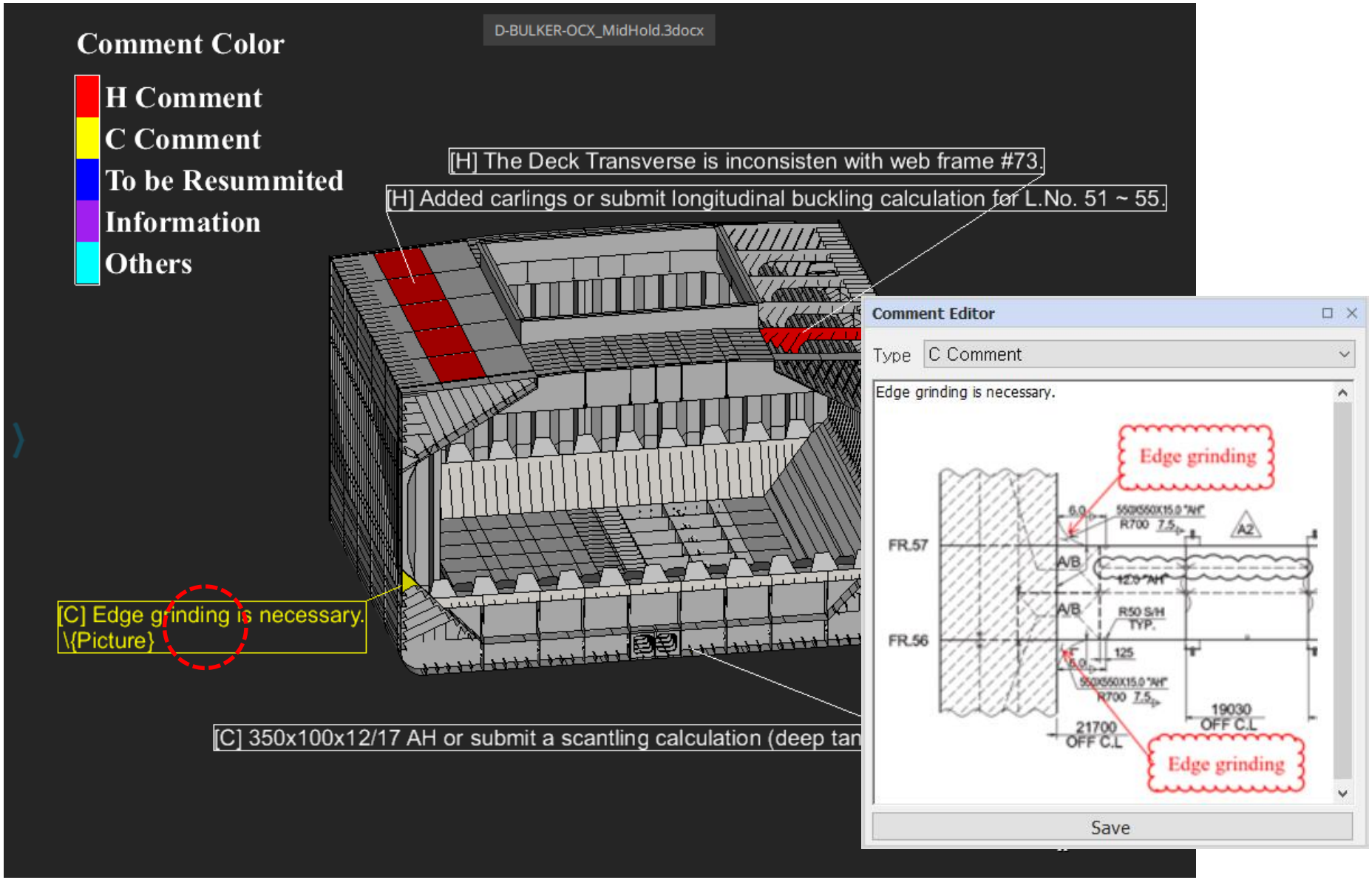
Comment Color
H Comment
C Comment
To be Resummited
Information
Others
D-BULKER-OCX_MidHold.3docx
[H] The Deck Transverse is inconsisten with web frame #73.
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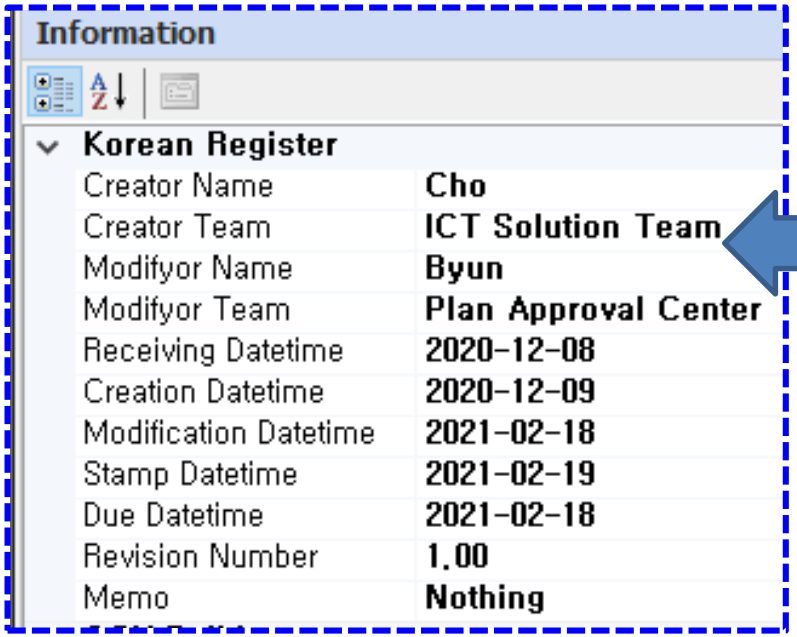
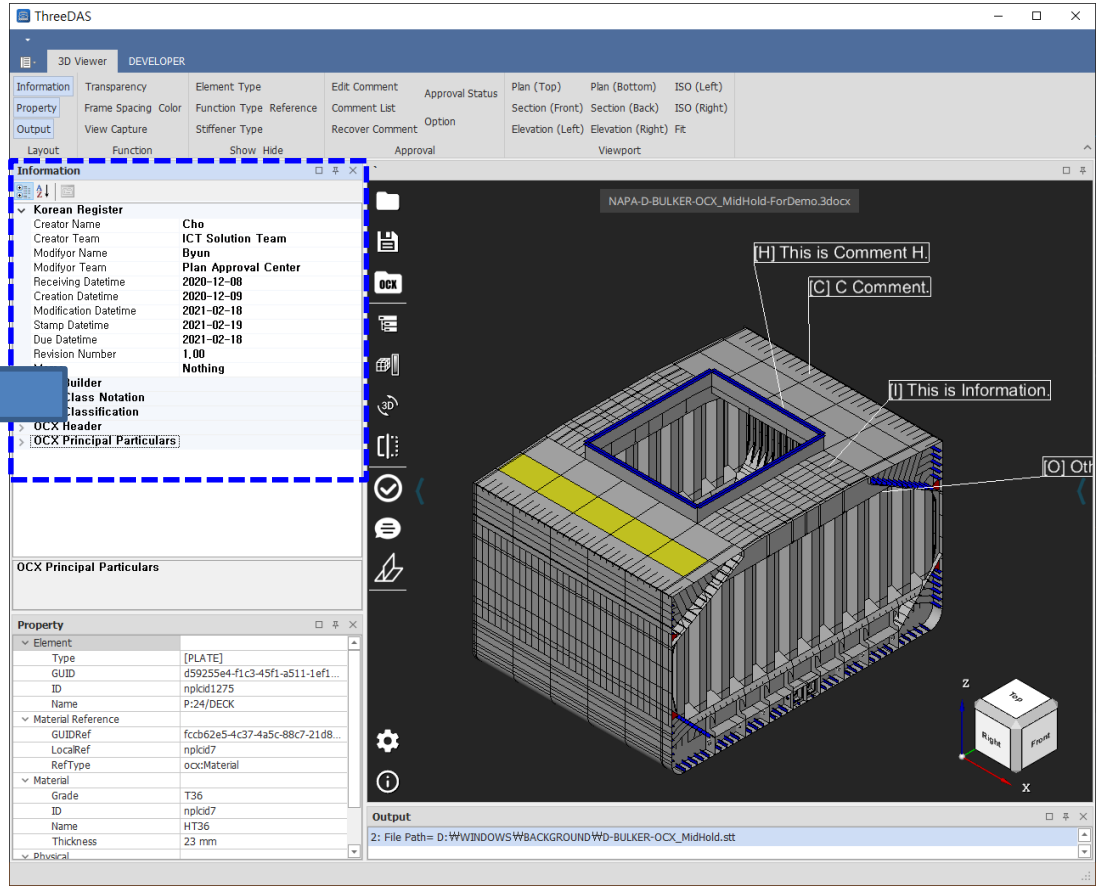
\{Picture}
[C] 350x100x12/17 AH or submit a scantling calculation (deep tan
Comment Editor
Type
C Comment
Edge grinding is necessary.
Edge grinding
FR.57
FR.56
A/B
R50 S/H
TYP.
R700
19030
OFF C.L
21700
OFF C.L
Edge grinding
Save

Approval Functions

Class Document Information





Video Demo

Conclusion

- Conclusion
  - KR develops 3D model-based structural design approval system.
  - It includes basic functions for approval and viewing 3D model.
  - It supports 3D OCX Format.
  - KR collaborates with Korean shipyard to implement OCX interface.

- Future Works
  - Pilot test between Korean Register and Shipyard for 3d model-based approval.
  - Implementation of OCX Interface for *SeaTrust-HullScan.

* SeaTrust-HullScan: Korean Register S/W for the rule calculation

Thank you

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