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ENERGY EFFICIENCY BY DESIGN AND RELATED NEW SYSTEMS.

IMO EXPERT WORKSHOP, LONDON
ENERGY EFFICIENCY, UNDERWATER RADIATED NOISE (URN)



PARENT HULL FORM – BUSINESS AS USUAL.

- Custom vessel designs stretch and modify parent hull forms.
- Vessels have complex machinery plants, operations
- Budget and time constraints limit analysis, optimization for energy efficiency and underwater radiated noise (URN)



PARENT HULL FORM – NEW APPROACH.

- Expand library of parent hull forms complete with model testing data for energy efficiency and URN
- New hull forms to suit custom vessel complex machinery plants & operations, e.g., twin propellers, electric plants, podded propulsion





DESIGN STANDARDS – BUSINESS AS USUAL.

- URN is uncommon as a current design criteria, except where affects vessel mission, e.g., research vessels
- Propellers are designed to meet specified operational performance with reasonable efficiency within available space
- Structure-borne noise measures are typically limited to impact on crew habitability



DESIGN STANDARDS – NEW APPROACH.

- URN limits to be specified at the design stage, verified in the trials stage
- Accessible parent hull library with necessary data to have confidence in energy efficiency and URN results
- Commercialized supporting technologies, e.g., propeller designs and systems, air mask and lubrication, wake flow modification systems

THANK YOU.

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