Key Features

◆ Shaft torsional vibration analysis service using the new TORRES (TORSional vibration RESponse analysis) calculation program
◆ Analysis based on both NK Rules and IACS UR M68

Evaluation of torsional vibration is essential for shafting system design. This is especially true for diesel engine driven shafting systems, as diesel engines generate exciting torque due to the internal combustion in each cylinder. ClassNK’s PrimeShip-TORRES is a service for carrying out torsional vibration analysis and evaluation.

Evaluation criterion

PrimeShip-TORRES is an analysis and evaluation service developed based on the wealth of knowledge contained in the ClassNK rules. PrimeShip-TORRES can be used to evaluate torsional vibration both at the design stage and during shafting system modification, e.g. replacement of the propeller etc. This service is a vital tool for preventing damage caused by torsional vibration.

Evaluation of essential items relevant to torsional vibration

Evaluations are provided for all essential items related to torsional vibration, including torsional vibration stress, barred speed range and gear chattering, among other items.
Rule based evaluation criteria

All evaluations are carried out in accordance with Chapter 8, Part D of the ClassNK Rules and Guidance, as well as IACS UR M68.

Comprehensive analysis reports

After the evaluations are completed, comprehensive analysis reports will be provided. Reports include diagrams of the torsional vibration stress and the engine speeds at which torsional vibration stress is generated, are diagrammatically as well as information on allowable stresses.

How to apply

Applications for PrimeShip-TORRES are to be submitted to the ClassNK Marine and Industrial Service Department. To apply for PrimeShip-TORRES, please submit relevant drawings and calculation data to:

Marine and Industrial Service Department
ClassNK Administration Center Annex
3-3 Kioi-cho, Chiyoda-ku, Tokyo 102-0094, Japan
E-mail: mid@classnk.or.jp
Tel: +81-3-5226-2175/2176
Fax: +81-3-5226-2177

Inquiries regarding technical matters related to PrimeShip-TORRES calculations should be directed to the ClassNK Machinery Department.