

ISO 20154:2017-10 (E)

Ships and marine technology - Guidelines on vibration isolation design methods for shipboard auxiliary machinery

Contents	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative reference	1
3 Terms and definitions	1
4 Basic requirements of vibration isolation system design	2
4.1 Vibration isolation performance	2
4.2 Vibration severity of machinery	2
4.3 Stability of machinery	2
4.4 Environmental adaptability	2
4.5 Ease of installation and maintenance	2
5 Design procedure of single-stage vibration isolation	2
5.1 General	2
5.2 Spectral analysis of disturbance	3
5.3 Natural frequency	3
5.4 Select type of vibration isolator	4
5.5 Layout of vibration isolators	4
5.6 Design of foundation	5
5.7 Single-stage vibration isolation system calculation	5
6 Design procedure of double-stage vibration isolation	5
6.1 General	5
6.2 Vibration character analysis of machinery	5
6.3 Design of intermediate mass and foundation	6
6.4 Selection of upper and lower isolators	6
6.5 Arrangement of isolators	6
6.6 Machinery items isolation	6
6.7 Calculation of double-stage vibration isolation system	6
Annex A (informative) Determination of the resonant frequencies of machine isolation system	9
Bibliography	10