

# ISO 19030-2:2016-11 (E)

## Ships and marine technology - Measurement of changes in hull and propeller performance - Part 2: Default method

---

<b>Contents</b>		<b>Page</b>
Foreword .....		v
Introduction .....		vi
1	Scope .....	1
2	Normative references .....	1
3	Terms and definitions .....	1
4	Measurement parameters .....	2
4.1	General .....	2
4.2	Primary parameters .....	2
4.3	Secondary parameters .....	3
4.4	Sensor installation, maintenance and calibration .....	3
4.5	External information .....	4
5	Measurement procedures .....	5
5.1	General .....	5
5.2	Data acquisition .....	5
5.3	Data storage .....	6
5.4	Data preparation .....	6
5.4.1	General .....	6
5.4.2	Data preparation frequency .....	7
5.4.3	Data retrieval .....	7
5.4.4	Data compilation .....	7
5.4.5	Data filtering and validation .....	8
5.4.6	Correction for environmental factors .....	8
5.4.7	Calculation of performance values (PVs) .....	8
6	Calculation of performance indicators (PIs) .....	9
6.1	General .....	9
6.2	Definition of PIs .....	9
6.3	Calculation of PIs .....	9
6.3.1	General .....	9
6.3.2	Determination of reference conditions .....	10
6.3.3	Establishment of reference period and evaluation period .....	10
6.3.4	Extraction of subsets of PVs from the complete set with PVs that fulfil reference conditions for reference conditions for reference period(s) and evaluation period .....	11
6.3.5	Calculation of the PI .....	11
7	Accuracy of PIs .....	12
7.1	General .....	12
7.2	Guidance on the expected accuracy of PIs .....	12
Annex A (informative)	Process of this document .....	14
Annex B (normative)	Approximating delivered power based on calculations of shaft power .....	15
Annex C (normative)	Approximating delivered power based on calculations of brake power .....	16

<b>Annex D (informative) SFOC reference curve .....</b>	<b>19</b>
<b>Annex E (normative) Calculation of true wind speed and direction .....</b>	<b>21</b>
<b>Annex F (informative) Procedure to obtain ship specific power-speed-draught-trim databases .....</b>	<b>24</b>
<b>Annex G (normative) Correction for wind resistance .....</b>	<b>25</b>
<b>Annex H (informative) Protocol to export data from data logger .....</b>	<b>27</b>
<b>Annex I (normative) Outlier detection .....</b>	<b>32</b>
<b>Annex J (normative) Validation .....</b>	<b>34</b>
<b>Annex K (informative) Method for calculating power performance values (PPV) and power performance indicators (PPI) .....</b>	<b>35</b>
<b>Bibliography .....</b>	<b>37</b>