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**I.S. CWA 15375:2005**

ICS 47.020.30

**SEPARATORS FOR MARINE RESIDUAL FUEL  
- PERFORMANCE TESTING USING SPECIFIC  
TEST OIL**

National Standards  
Authority of Ireland  
Glasnevin, Dublin 9  
Ireland

Tel: +353 1 807 3800  
Fax: +353 1 807 3838  
<http://www.nsai.ie>

**Sales**  
<http://www.standards.ie>

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**CEN**

**CWA 15375**

**WORKSHOP**

August 2005

**AGREEMENT**

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English version

## Separators for marine residual fuel - Performance testing using specific test oil

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties, the constitution of which is indicated in the foreword of this Workshop Agreement.

The formal process followed by the Workshop in the development of this Workshop Agreement has been endorsed by the National Members of CEN but neither the National Members of CEN nor the CEN Management Centre can be held accountable for the technical content of this CEN Workshop Agreement or possible conflicts with standards or legislation.

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COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**Management Centre: rue de Stassart, 36 B-1050 Brussels**

**CWA 15375:2005 (E)**

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## **Foreword**

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties on 2005-07-04, the constitution of which was supported by CEN following the public call for participation made on 2004-05-05.

A list of the individuals and organisations that supported the technical consensus represented by the CEN Workshop Agreement is available to purchasers from the CEN Management Centre. These organisations were drawn from the following economic sectors: Classification societies, Diesel engine manufacturers, Oil companies, Separator manufacturers and Ship owners and operators.

The formal process followed by the Workshop in the development of the CEN Workshop Agreement has been endorsed by the National Members of CEN but neither the National Members of CEN nor the CEN Management Centre can be held accountable for the technical content of the CEN Workshop Agreement or possible conflict with standards or legislation. This CEN Workshop Agreement can in no way be held as being an official standard developed by CEN and its members.

The final review/endorsement round for this CWA was started on 2005-04-05 and was successfully closed on 2005-06-15. The final text of this CWA was submitted to CEN for publication on 2005-07-04.

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Comments or suggestions from the users of the CEN Workshop Agreement are welcome and should be addressed to the CEN Management Centre.

## **CWA 15375:2005 (E)**

### **Introduction**

In general, diesel engines for propulsion of ships burn marine residual fuels. Marine residual fuels contain the residue remaining after lighter fractions have been extracted from the crude oil during various processes in the oil refinery. They are a blend of this heavy fraction to which other refinery stream products are added to obtain the desired viscosity grade. Marine residual fuel oils contain elements inherent to the product itself but they also contain some contaminants, which either are due to an external contamination or enter into the fuel at the refinery during production, such as small fragments of a catalyst, used in the catalytic cracking stage in order to cut long molecule chains into smaller molecule chains. The catalyst fines are extremely hard and abrasive, and if not removed from marine residual fuel, can damage diesel engines with severe economic and, in extreme cases, safety consequences. The normal way of removing catalyst fines and other contaminants from marine residual fuel is by centrifugal separation.

It is important that all fuels are centrifuged efficiently to minimise the level of contaminants, including catalyst fines.

In bunkered oil the maximum content of catalyst fines, expressed as the total content of Aluminium and Silicon, is 80 mg/kg according to ISO 8217:1996. For bunkered fuels containing the maximum level of catalyst fines (80 mg/kg), engine builders expect the level of catalyst fines to be reduced to below 15 mg/kg, in the fuel entering the engine. As the level of catalyst fines in the bunkered fuel is lowered, the engine builders expect a related reduction in the amount of catalyst fines in the fuel entering the engine.

For many years now there has been a demand from engine builders, ship builders, ship owners and classification societies for reliable performance criteria for the separators' ability to remove abrasive particles from marine residual fuels. The purpose of this CEN Workshop Agreement is to meet this demand by specifying a repeatable method to determine separation performance as regards specific test particles in specific test oil.

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