

# Isle of Man Ship Registry Technical Advisory Notice

## Ammonium Nitrate Based Fertiliser - Thermal Decomposition

Ref. 008-18  
Issued 14 Aug 2018

This TAN is applicable to operators of bulk cargo vessels.

The Isle of Man Ship Registry wishes to raise awareness towards Ammonium Nitrate Based Fertiliser (**ANBF**) cargoes to enhance its safe carriage in bulk.

An Isle of Man registered bulk carrier suffered a thermal decomposition of ANBF cargo in one cargo hold which spread to the remaining cargo holds resulting in the emergency evacuation of 23 persons and the constructive total loss of the vessel ([casualty report available here](#)). Please note this report is almost 30Mb, so consider your data requirements.

Circular [CCC.1/Circ.4](#) was published by IMO last year and modified as a result of the circumstances surrounding this particular incident.

Managers and operators carrying or intending to carry this cargo are urged to develop specific SMS procedures for this cargo highlighting the warning signs to look for, the dangers to be aware of and the specialist equipment which can be supplied and utilised to identify and arrest a decomposition; should one occur.

### Causes

- Heat – ensure all heat sources are isolated from the cargo hold prior to loading and at every stage of the carriage.

### Warning signs

- Visible decomposition gases and ammonia gas – these are toxic and pose a risk to life.
- Marked rate of rise of temperature in the cargo hold.
- Reduction in the oxygen content in the cargo hold (as decomposition gases displace it).
- Presence of water vapours –ANBF cargoes are manufactured with very low water content and the visible presence of water should always be questioned.

### Actions

- Contact the manufacturer for advice if decomposition is suspected at any time.
- Look at your SMS cargo specific procedures (for ANBF) for related information.
- Know what to do - reacting swiftly reduces the impact of a thermal decomposition and has a better chance of arrest.
- Ventilation – maximise natural ventilation (open hatch covers where weather permits)
- Cooling - direct injection of water, if possible, is more effective than cooling from above.

*Please note - The Isle of Man Ship Registry cannot give legal advice. Where this document provides guidance on the law it should not be regarded as definitive. The way the law applies to any particular case can vary according to circumstances - for example, from vessel to vessel. You should consider seeking independent legal advice if you are unsure of your own legal position.*

