

Engineering Bulletin EB-IMTS5HF-0501 Inspection and Maintenance of Munters TS-5<sup>TM</sup> Horizontal Flow Mist Eliminator

NOTE: Before performing inspection or maintenance, verify appropriate safety procedures with supervisory personnel, especially before entering closed vessels.

To ensure continued trouble-free mist eliminator service, periodic internal inspections and appropriate maintenance should be performed. Preventive procedures should be routinely scheduled and accomplished during every systems outage.

Typically, this maintenance program should include:

- 1. Visual check of all internals, blade elements, structural members, etc., for solids buildup.
  - a) Buildup of solids on mist eliminator profiles can lead to reduced performance and even eventual shutdown. Any buildup should be investigated and the cause corrected, before putting the eliminator back in service. Generalized buildup may indicate either excessive system carry over, an upset in system chemistry, temperature excursion, or too brief or too infrequent washing periods. Localized areas of buildup may indicate malfunction of the spray-wash system, especially plugged nozzles, liquid impinging on the eliminator, or poor distribution.
  - b) Clean all areas of solids buildup with high-pressure hoses (300 psi or below) as required.
- 2. Visually check lower sump and discharge pipe for excessive solids buildup.
  - a) Clean with high-pressure hose (300 psi or below) if required.
- 3. If spray system is utilized, check spray nozzles for evidence of malfunction. Disassemble, if necessary, and check internals for excessive wear or plugging. Clean and/or replace as required.

  Manually cycle "on" individual spray headers, checking valve function and sequence. Visually check mist eliminator for spray coverage and intensity. Verify correct line pressure. Clean strainers as required. Verify for flow through drains.
- 4. Visually check all connections and member attaching hardware. Verify tightness of all components. Check for evidence of relative movement and proper component clearance. Check modules and mounting structure for cracks, bending or breakage. Repair or replace as needed.

Maintenance should also include the following "on line" observations and practices:

- 5. Routine daily review of operational data for the purpose of identifying equipment and/or component malfunction, as evidenced by:
  - a) Abrupt or continued increase or decrease in operating pressure drop.
  - b) Abrupt or continued increase or decrease in spray system pressure.
  - c) Excursions in temperature, flow rates, effluent discharge, drain liquid flow, etc.
- 6. Maintenance of a detailed log, including specific procedure for inspection, cleaning and replacement operations, with dates and times and operating data.
- 7. Maintenance of an adequate inventory of spare parts for quick turnaround repair or replacement.



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## **Product Safety**

Safety, of everyone handling, installing, servicing and operating Munters products is our #1 concern. Munters ME Division products are designed, with safety in mind.

Munters cannot be aware of all of the safety, fire and personnel procedures in force among all our customers. The following is intended to be a general overview of potential hazards, not a complete safety course. We urge you to check with your supervisor to be sure that you are familiar with all of the regulations covering your job and job site, and that you have all the training and equipment needed to perform your job safely.

**Confined Spaces -** Whenever equipment is installed inside a tower, tank, vessel or anywhere that entrance and exit is limited, it may be considered a "confined space". Special hazards can include heat, toxic or asphyxiating gasses and fire. Access to "confined spaces" is generally controlled and may involve special procedures for lockout of equipment which could affect the environment in the space,

**Fire -** Many products are flammable if ignited, especially products made of PVC (SCRUBdek<sup>TM</sup> and DRIFdek®) and polypropylene (mist eliminators) to mention just a few. These products can easily be ignited from any source of ignition, but welding is perhaps the most common. Not only do welding sparks and splatter, present a danger, but improperly discarded welding rod stubs can ignite flammable materials. Welding on the outside of a vessel having flammable mist eliminators or packing in contact with the inner surface of the vessel, can be the source of ignition., remember that products of combustion may be toxic, asphyxiating or inflammable themselves.

**Personnel Access -** Mist eliminators and packing should not be used for personnel access. Whenever it is necessary for personnel to be on eliminators or packing, planking or plywood of sufficient strength must be placed over the surface SPANNING AT LEAST 2 SUPPORTS, and personnel must not venture off the planking.

**Sharp Edges -** Sharp edges can be found on any equipment, but especially on light gauge fabrications such as METAdek® and mist eliminators. Proper attire must be worn.



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