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This Technical Information Paper may require the use, disposal, or both of chemicals that may present serious health hazards to humans. Procedures for the handling of such substances are set forth on Safety Data Sheets that must be developed by all manufacturers and importers of potentially hazardous chemicals and maintained by all distributors of potentially hazardous chemicals. Prior to the use of this technical information paper the user should determine whether any of the chemicals to be used or disposed of are potentially hazardous and, if so, should follow strictly the procedures specified by the manufacturer as well as local, state, provincial, and federal authorities for safe use and disposal of these chemicals.

Guidelines for Routine Periodic Inspection and Testing of Yankee and MG dryers

Scope

This Technical Information Paper (TIP) provides guidelines for routine periodic inspection and testing of cylindrical pressure vessels known as Yankee or MG dryers, used as rotating, steam-heated dryers in paper machines. The purpose of the paper is not to provide detailed inspection procedures but to provide an industry wide “benchmark” on the scope and frequency of recommended inspections and tests giving the mill a better understanding so they can better: plan outages, evaluate contractors and identify & rectify problems. This TIP covers dryers that have components that have been cast, fabricated (welded) or forged.

Safety precautions

Personal safety for inspectors should be ensured by complying with jurisdictional and mill procedures for lockout procedures and safe entry of a confined space. The dryer must be cooled enough for safe entry and adequately ventilated. All personnel shall use the specified personnel protective equipment (PPE).

Definitions

Group definitions

Safety: a failure may cause one or more of: injury or death to personnel, damage to capital equipment, damage to environment.

Reliability: a failure may cause one or more of: unplanned outages, additional maintenance costs.

Process: a failure may cause one or more of: reduced product quality, reduced production, reduced efficiency.

Condition definitions

Run: the machine is in normal operation.

Stop: the Yankee not rotating but it is still hot.

Cool: the Yankee is stopped and has been cooled sufficiently for entry.

Hot: the Yankee is pressurized and /or has a surface temperature > 90°C (194°F)