

Design Audit of a QDS TDT4000 Flinger Duster
For CQME- Pty.

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Ref: 100106-1

The flinger duster is shown on attached drawing CQME808. The duster contains stone dust. The user should conduct a risk analysis to examine the operational and safety aspects with this type of attachment for their transporter and working environment. The following Australian Standards were referenced.
 Design to AS3990 Mechanical Equipment-Steelwork.
 Stability to AS1418 SAA Crane Code

Result

The duster is suitable for use on the following LHD type loaders, Eimco 130LHD, 220LHD, ED7, ED10, Jug-A-O, DBT FBL10 & Wagner 3.5 LHD.

A permanent steel label must be attached to the duster listing the following information:

QDS Flinger Duster TDT4000	
Approved Loaders	Eimco 130LHD, 220LHD, ED7, ED10 Wagner 3.5LHD, JUG-A-O & DBT FBL10
SWL	3720kg of stone dust
Tare	2525 kg
Height Limit	1100mm off floor to maintain stability
Cautions	Refer to Mine Approved Operating Procedures
Max cross grade	12 deg
Max incline	12 deg
Manufacturer-	CQME-Pty Mackay QLD
Serial No.	As advised by CQME
Ref	CQME808

Stability requirements for the referenced machines have been checked.

Loader type Eimco 130LHD has an estimated stabilizing moment of 17.8 tonne.metres determined about the front axle and includes a 40% stability margin and factored for cross grade, inclines and articulation. When attached to the fully loaded Duster a tipping moment of 13.6 tonne.metres is produced. Ratio of stabilising to destabilising moments should be greater than 1.0 and is 1.3.

Other loaders listed have higher stabilizing moments. The 40% stability margin will allow for variations in the density of the stone dust in the range 1.1 tonnes/m³ to 1.3 tonnes/m³.

Limitations of this audit as required by the Board of Professional Engineers-Qld.

This document confirms that the mechanical design of the duster has been assessed for the conditions specified above. The quality of materials, manufacture, testing and inspection is the responsibility of others.



Gary Keeton-Mechanical Engineer

