

DIN EN 1034-4:2006-02 (E)

Safety of machinery - Safety requirements for the design and construction of paper making and finishing machines - Part 4: Pulpers and their loading facilities

Contents		Page
Introduction		4
1	Scope	4
2	Normative references	4
3	Terms and definitions	6
4	List of significant hazards	7
5	Safety requirements and/or measures	8
5.1	General	8
5.2	Requirements for safety devices	8
5.3	Power transmission elements	9
5.4	Workplaces, access stairs, catwalks, passageways	9
5.5	Falling hazard on pulpers	9
5.6	Loading facilities on pulpers	12
5.7	Start-up warning devices	13
5.8	Emergency stop devices	13
5.9	Isolation and energy dissipation, prevention of unexpected start-up	14
5.10	Control systems and actuators	14
5.11	Integrated lighting	14
5.12	Ergonomic principles	14
5.13	Electrical equipment	14
5.14	Hydraulic equipment	14
5.15	Pneumatic equipment	14
5.16	Noise hazards	15
5.17	Dangers from hazardous substances	15
5.18	Equipment and measures for maintenance and inspection and cleaning	15
5.19	Hazards generated by material	15
5.20	Powered valves	15
6	Verification of compliance with safety requirements and/or protective measures	15
7	Information for use	16
7.1	General	16
7.2	Specific information on machinery	16
7.3	Specific information in the instruction handbook	16
Annex ZA (informative)	Relationship of this European Standard with the Essential Requirements of EU Directive 98/37/EC	18
Bibliography		19
Figures	Figure 1 -- Pulper with loading facility (example)	6
	Figure 2 -- Drum pulper (example)	7
	Figure 3 -- Protection against falling from a height at discharge openings for waste (recovery stock) Figure 4 -- Protection against falling from a height on recovery pulper underneath the Pope reel winder	12