

DIN EN 1034-6:2006-03 (E)

Safety of machinery - Safety requirements for the design and construction of paper making and finishing machines - Part 6: Calender

Contents		Page
Foreword		4
Introduction		5
1	Scope	5
2	Normative references	5
3	Terms and definitions	7
4	List of hazards	9
5	Safety requirements and/or measures	12
5.1	General	12
5.2	Start-up warning devices	12
5.3	Emergency stop devices and braking systems	12
5.4	Web threading and sheet feeding	13
5.5	Workplaces, access stairs, catwalks, passageways	13
5.6	Isolation and energy dissipation, prevention of unexpected start-up	13
5.7	Facilities and measures for make-ready and repair	13
5.8	Safety measures for cleaning operations	14
5.9	Control systems and actuators	14
5.10	Noise	15
5.11	Integrated lighting	15
5.12	Ergonomic principles	15
5.13	Electrical equipment	15
5.14	Hydraulic equipment	15
5.15	Pneumatic equipment	16
5.16	Winding and unwinding units	16
5.17	Roll stacks	17
5.18	Rider rolls	18
5.19	Lifting platforms and their means of access	18
5.20	Control systems, emergency stopping, energy isolation of lifting platforms	20
5.21	Lifting platform load control, driving units and drive systems	20
5.22	Web cutting devices	21
5.23	Power transmission elements	21
5.24	Heating systems	21
5.25	Traversing measuring instruments	21
5.26	Web trimming	21
5.27	Doctor blades	21
5.28	General requirements for safety devices	21
6	Verification of compliance with safety requirements and/or measures	22
7	Information for use	23
7.1	General	23
7.2	Specific marking	23
7.3	Specific information in the instruction handbook	23
Annex ZA (informative)	Relationship between this European Standard and the Essential Requirements of EU Directive 98/37/EC	25

Figures	
Figure 1 -- Off-line calender (example)	8
Figure 2 -- On-line calender (example)	9
Figure 3 -- Example of an access to a lifting platform in upper position	19
Tables	
Table 1 -- List of significant hazards	9
Table 2 -- Methods used to verify safety requirements and/or measures	22