

ECTA Safety Recommendations for Winding Heads for big diameter Spiral Winding Machines

Preliminary remarks:

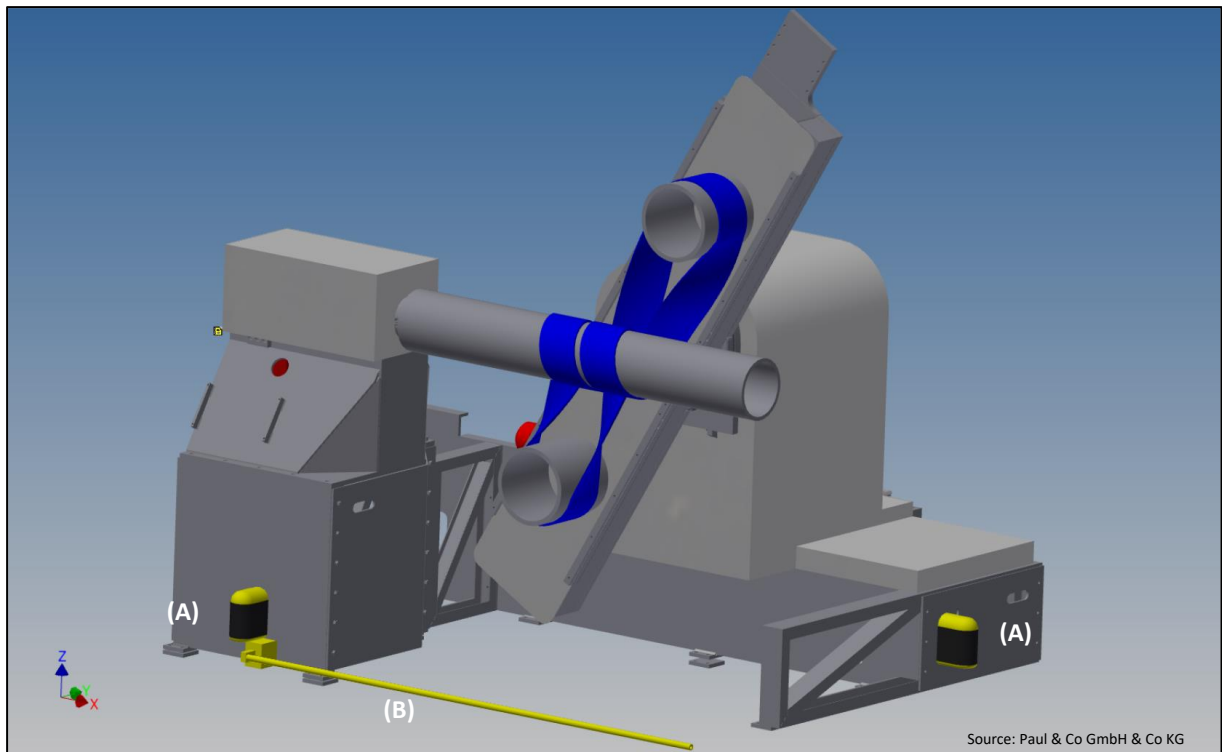
In the tube and core industry, the equipment in use differs in size, type and operation, depending on the manufacturer. The ECTA Safety Committee has made an effort to take into account all the existing differences in writing these safety recommendations. The committee advises you to take national standards and norms into account when applying ECTA safety recommendations. The current Machinery Directive 2006/42/EC and the relevant CE norms are to be observed as well.

A. Basic requirements

- I. Documented risk analysis
- II. At least one safety seminar per year for all employees who work with the equipment, led by the supervisor, manager or an industrial safety expert and documented in writing
- III. Pneumatic quick-release of the winding drum – with extension-control
- IV. Protective devices which already exist on the equipment may not be removed.
- V. Placement of visual warnings at dangerous spots which cannot be secured due to the nature of the operation.

B. Basic elements of the technical safety devices

- I. Direct protection of moving parts.
 1. Protective cover at the drum with contact switch.
 2. Emergency stop mechanism
 - 2.1 Control wire protection
 - 2.2 Contact strips
 - 2.3 Electric eye
 - 2.4 Emergency stop button
 - 2.5 Equivalent devices



Example for a vertical winding head for big diameter

II. Area safeguarding during normal operations

1. Emergency buttons on the control panel or exposed machine parts
2. Safety switch radar (A)
3. Light curtains to prevent backwards entrance to the machine (not mentioned in the picture)
4. Baffle plate on the left side (B)
5. Additional baffle plate at the front (not mentioned in the picture)
6. Safety shutdown board

III. Area safeguarding during setup operations

(Belt speed of 5-10 m per minute)

1. Safety switch
2. Safety switch mats
3. Light curtains
4. Baffle plate
5. Safety shutdown board

An example of a safety concept for spiral winding machine is enclosed as an appendix. The example refers to a machine for big diameter.