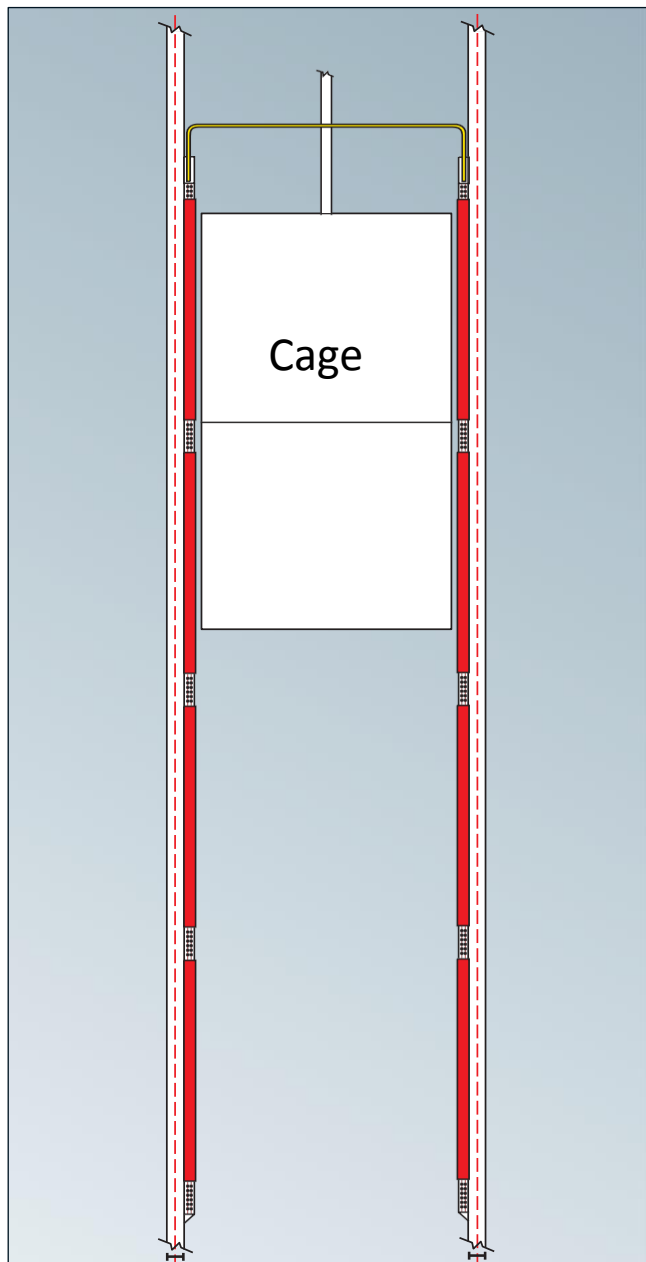




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Control that impact



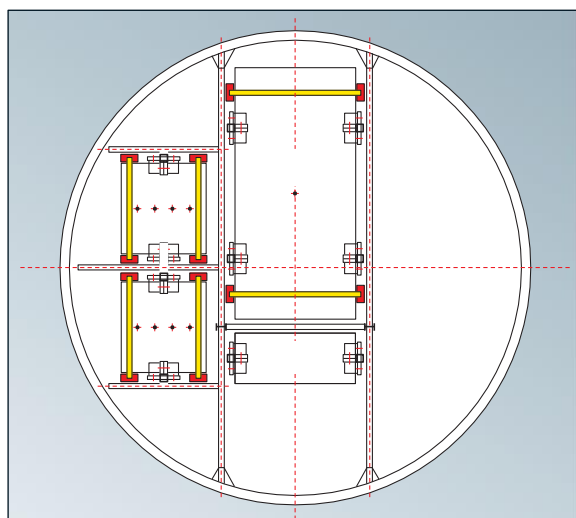
Side view of how the Technogrids® can be installed inside the shaft steel work.

What is overwind?

Conveyance arresting in the accidental event of the winder not stopping the conveyance timeously.

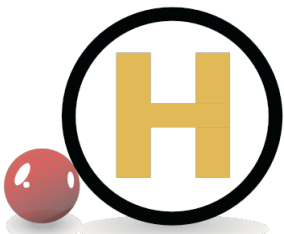
Advantages of the Technogrid® overwind impact protection system

- Very light initial impact force:
 - light catchframe ($\pm 400\text{kg}$ (880lb) per conveyance)
 - progressive energy absorption properties of the Technogrid® (refer to force stroke diagram).
- Predictable reaction forces relating to cage and headgear design.
- Technogrids® are very narrow and therefore occupy minimal space in the shaft steel work.
- Technogrid® can be easily retrofitted to existing mines. Each retrofit is custom designed to suit each application.
- No maintenance requirements (recommend annual inspections).



Plan view of how the Technogrids® can be installed inside the shaft steel work.

For more information on the Technogrid®, Technogrid® dimensions and the latest updates, please visit the website



technogrid®

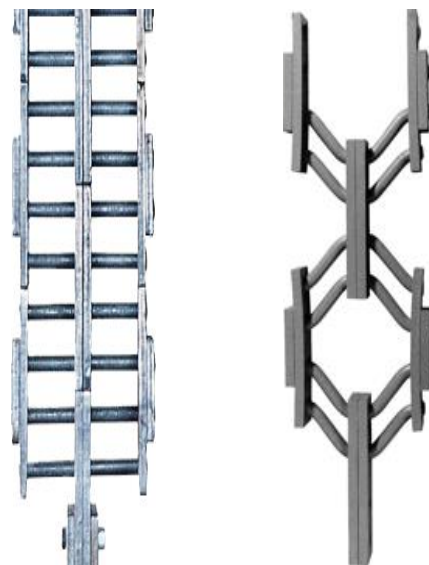
Predictable kinetic energy absorption

The process involved and the factors that have to be quantified in designing the over/underwind impact protection system

- System inertia
 - Winder
 - sheave wheel
 - Rope
 - cage/skip (including payload)
 - counter weight
- Stroke area (stopping distance)
 - function of acceptable deceleration
 - rope breaking force
- Impact speed
- Once the total system energy is calculated, the appropriate **Technogrid®** configuration is determined.

The **Technogrids®** are always installed in units in series. Additional strings can be added in parallel if required.

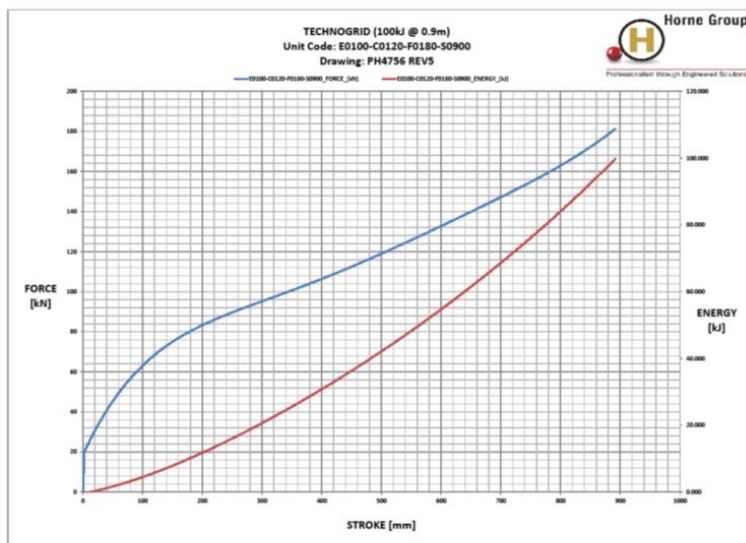
- In order to reach a practical solution, it may be necessary to adjust the stroke area



Technogrid® before and after impact



225kJ Technogrid® used for overwind and underwind impact protection (encased in steel cover)



Please consult Horne for technical input on the design of the overwind arresting system as there are many considerations and approaches to this type of design