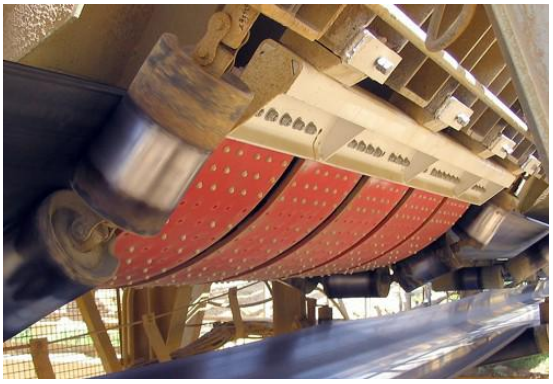
Elastic device for products loading on belt conveyors

(Patented system AI nr 52.2735759)



FLEXAL® device (patented A I n° 52 2735759) consists of cross belt elastic straps which, through their flexibility and their elongation ability, absorb impact energy and weight of loaded products.

The straps, more or less numerous, are supported by a metal framework, adjustable in all 3 dimensions in order to fit the system to every trough angle, from 20 to 70°. Each strap is fitted with sliding pads made of very high molecular weight HDPE. They are replaceable and their number is flexible, depending on the application.

Pad's fixing to the strap is designed such that its elongation is not hindered. The belt is in contact with a large number of pads which automatically distribute strains and frictions due to elastic supporting.

Pressure is then very low which generates

- very little wear and therefore long lifetime for pads
- negligible energy absorption.

BENEFITS

The matchless elasticity of the system can effectively contend agressions against the belts, linked to :

- the nature of the product
- the edge grain angle (cutting products)
- the dropping height
- the belt speed
- the abrasiveness of the product.

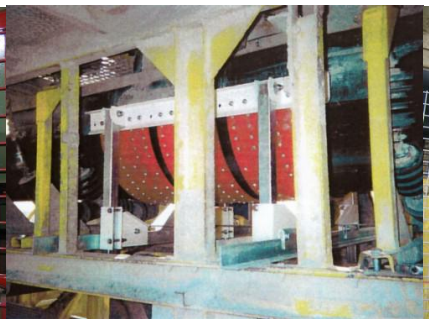
Punching, the main factor of belt deterioration is avoided.
Sealing is improved, because the banks of the device offer to the spill preventing rubbers an olmost as continuous supporting area.
With deep trough product centering is improved and spill preventing rubbers are simplified or eliminated.
FLEXAL® can be appreciated in all industrial uses,quarrying, cement works, steel industry, recycling,waste treatment, etc...
Its damping capacity fits alse wet products (paper indusrtry) or corrosive (salt, fertilizers).
In every case FLEXAL® increases belt lifetime and reduces conveyor's maintenance costs.

SETTING UP

FLEXAL® has always to be set up between 2 idler stations having the same trough angle, (festoon type or 5 rollers stations) when troughing angles are more than 45°
These idlers provide trough shaping of the belt respecting the transition zone and limiting strains.
When the transition zone is short, troughing angle must be limited to the same value as the first station located in the impact zone.
Easy and fast assembling (2 cross pieces to be bolted to the conveyor's framework).

MAINTENANCE

Extremely simple in design, FLEXAL requires no special maintenance.
Working visibility and visual inspection of condition are always possible.
In most cases, pads have a very long lifetime, and their replacement requires no special skill nor special tools.

MANUFACTURING RANGE

Types	Eligible Width
FLEXAL 650	500 and 600 mm (20 and 24")
FLEXAL 800	800 mm (28 and 30")
FLEXAL 1000	1000 mm (36 and 42")
FLEXAL 1200	1200 mm (48")
Adjustable trough 1000 / 1200	650 / 800 mm (26 / 32") 1000 / 1200 mm (36 / 48")
FLEXAL 1400/1600	1400 and 1600 mm (56 / 64")
FLEXAL 1800/2000	1800 and 2000 mm (54 and 60")
Adjustable trough 1400 / 2000 **Available for straps 1000 and 1200**	1400 / 2000 mm (70 and 80")