

CASE STUDY PMA CABLE PROTECTION FOR MACHINERY

With the flexibility of PMA® Cable Protection

New technologies help construction industry recycle its insulation material waste



PMA® cable protection products are employed for maximum protection of the installation's cable connections under rigorous conditions.

Waste is an inevitable by-product of business. Moreover, waste handling generates significant costs for most organisations. How organisations handle their waste dictates this cost, and in turn dictates the impact the organisation has on the environment as a whole.

By optimizing waste handling process, companies can reduce costs but also turn their recycled waste into a revenue stream. This is a financially viable solution, and an environmentally friendly one too.

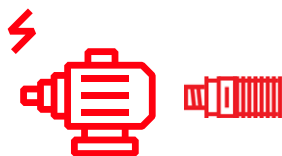
When Mil-tek was looking to introduce the new IC60 Insulation compactor, they needed a comprehensive cable solution that could withstand great demands on the application. Founded in Denmark in 1992, Mil-tek's goal is to manufacture and supply equipment to help businesses optimize their waste handling



30%

of building materials delivered to a construction site can end up as waste





The very flexible
PMA® LLPA
 conduit for machine building,
 installation and construction
 industries



process in order to minimize the time, space and money wasted on waste. Mil-tek believes they can vastly reduce the impact that waste has on business and on the environment. Mil-tek produces waste presses and is known to many for its cardboard presses, used in both retail and industry.

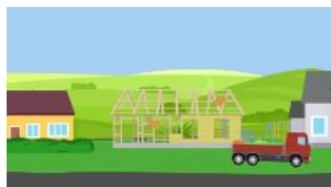
Now Mil-tek has embarked on a new business area in which it focuses on helping construction companies with their waste problems. It initially devised a machine that can reclaim insulation from landfill and turn it into a recyclable material.

The new IC60 Insulation Compactor shreds and compresses mineral wool and insulation. It can compress over 500kg of insulation per hour. The machine is fed with glass wool and rock wool which it shreds to granules, to a grain size of 40 micro-metres. This granulate can then be recycled for new insulation and the company enters into 'sustainable construction' which is an important topic in the

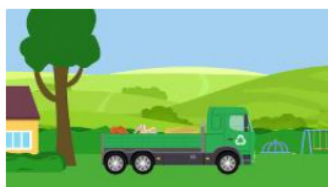
construction industry. "We contacted Bagger-Nielsen when we were developing our IC60 insulation compactor and needed advice on cabling and cable protection for this specific machine," says Allan Mikkelsen, Development Manager at Mil-tek.

A very flexible PMA conduit for the new Mil-tek IC60 Insulation Compactor withstands the rigor

Many years in the industry have given Bagger-Nielsen sufficient experience to be one of the most capable advisors in the market. Bagger-Nielsen and PMA have been partners for protective conduits and fitting systems for over 30 years. Various options were discussed, which resulted in a solution with PMA's cable protection programme consisting of protective conduits and fittings.



Mineral and rock wool is a vital component in construction, used to insulate buildings.



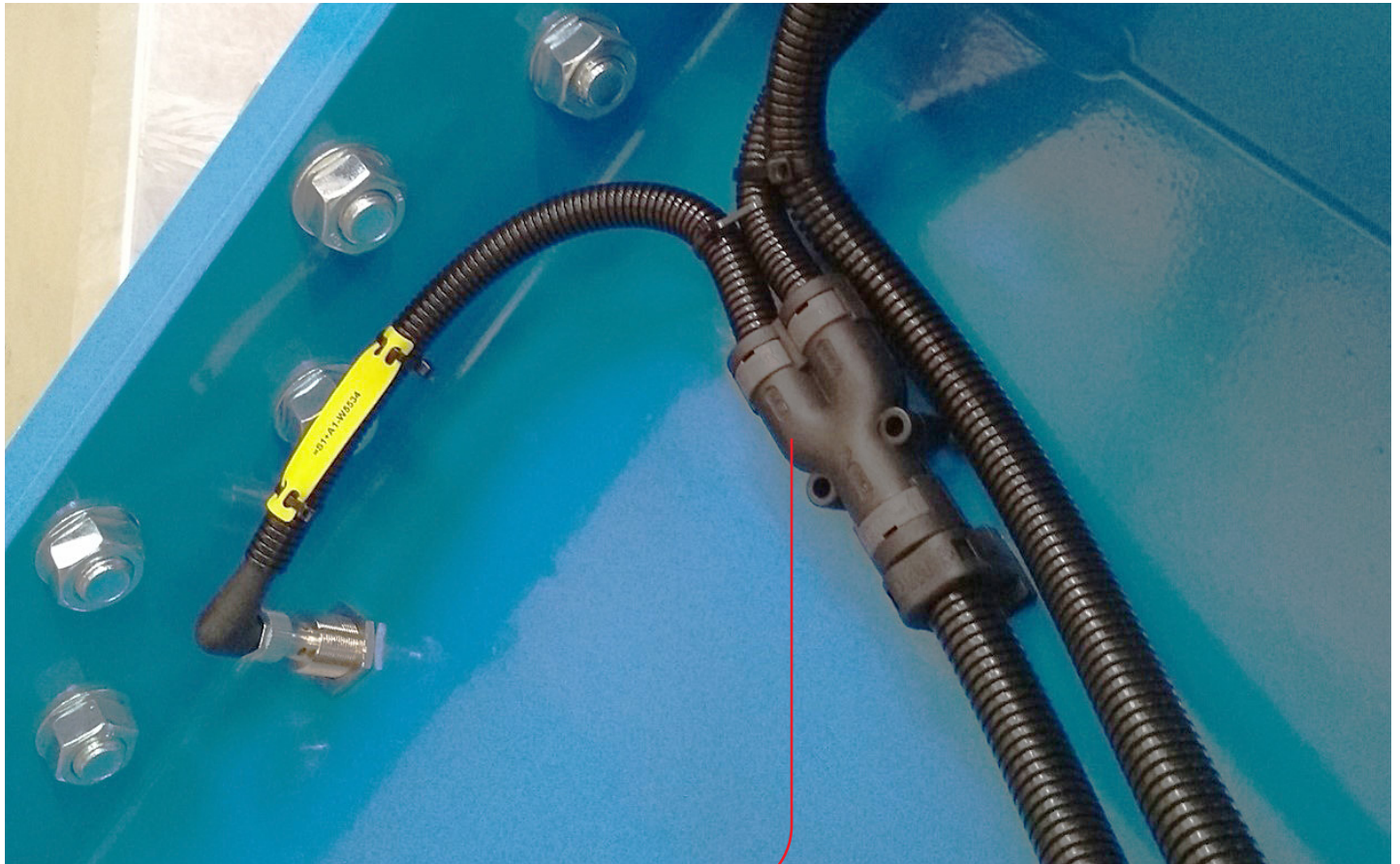
Once a building is to be renovated/demolished, the insulation is removed and sent to landfills.



An insulation compactor takes mineral wool destined for landfill and compresses it into fine powder.



The compressed material is completely recyclable and is ready to be used to make new insulation material.



A complete solution:
PMAFIX
connectors with FH-O support
system for mounting the
conduits.

For this project, the PMA LLPA conduit was chosen as it performed very well on all parameters and could both meet the requirement for very great flexibility to maneuver around the corners of the machine while at the same time being resilient to external mechanical influences.

The PMA LLPA conduit is a very flexible conduit for the machine-building, installation and construction industries. Made from specially modified polyamide 6, it provides solid mechanical characteristics and is free from halogens. The conduit is REACH +

ROHS compliant and withstands temperature from -40°C to $+105^{\circ}\text{C}$, and in the short term to $+160^{\circ}\text{C}$.

In addition, it has a large number of international approvals which helps ensure that it can be used in most countries. With the large selection of PMAFIX fittings available, including T and Y pieces, it was possible to put together a wiring set that expertly fits the physical conditions of the machine. PMAFIX is based on a perfected system technology that makes installation easy. Customers can choose from a wide range of connectors suitable for various installations. Additionally, the PMA one-piece FH-O System support with a simple conduit push-in installation has been used for mounting the conduits on the Insulation Compactor.

Mil-tek expects the insulation compactor to become a fixture at the country's recycling stations in the coming years.

The IC60 Insulation Compactor shreds and compresses mineral wool and insulation. It can compress over 500kg of insulation per hour.



"Throughout the process, we have received sound advice from the team on cabling that would enable us to optimize the machine", says Benjamin Serup, mechanical engineer at Mil-tek.

The IC60 insulation compactor has been so successful that we are already working on solutions for the future models that are in the pipeline. Mil-tek expects the insulation compactor to become a fixture at the country's recycling stations in the coming years.



With its PMA cable protection product range, ABB offers an extensive portfolio of conduits, fittings and accessories for a wide variety of markets and applications.

ABB PMA and Bagger-Nielsen

A longstanding, successful partnership in cable protection links ABB PMA Cable Protection with Bagger-Nielsen in Denmark. Bagger-Nielsen is a modern and innovative company that focuses on importing and selling high-quality products that are hand-picked from a variety of manufacturers around the world. ABB PMA has been a reliable Bagger-Nielsen partner for protective conduits and fitting systems for over 30 years. Bagger-Nielsen values good old-fashioned cleanliness, something that is reflected both in its professional customer service and in the quality of its deliveries.

Mil-tek

Mil-tek was founded in 1992 with the aim of doing its utmost to help companies optimize their internal waste management processes and hence save time, space and money - an objective been achieving and focusing on since its founding. Today, the company is represented in more than 30 countries and has delivered more than 50,000 solutions worldwide.

www.miltek.dk

Contact details

ABB AG

PMA Cable Protection

Aathalstrasse 90
8610 Uster, Switzerland
Tel: +41 / 58 585 00 11
pma-info@ch.abb.com
www.pma.ch

Bagger-Nielsen

Bagger-Nielsen ApS
Svalehøjvej 10
3650 Ølstykke, Denmark
Tel: +45 / 7020 7633
Fax: +45 / 7020 7603
info@bagger-nielsen.dk
www.bagger-nielsen.dk

ABB Switzerland AG
PMA Cable protection
Aathalstrasse 90
CH-8610 Uster
Switzerland

www.pma.ch

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