

SUCCESS STORY

AdvaProtect Segments
from ANDRITZ



PANELBOARD

LIKE NEW – EVERY TIME

**ADVAPROTECT SEGMENTS FOR PLUG
SCREW FEEDERS – WORLD FIRST**

ANDRITZ

ENGINEERED SUCCESS



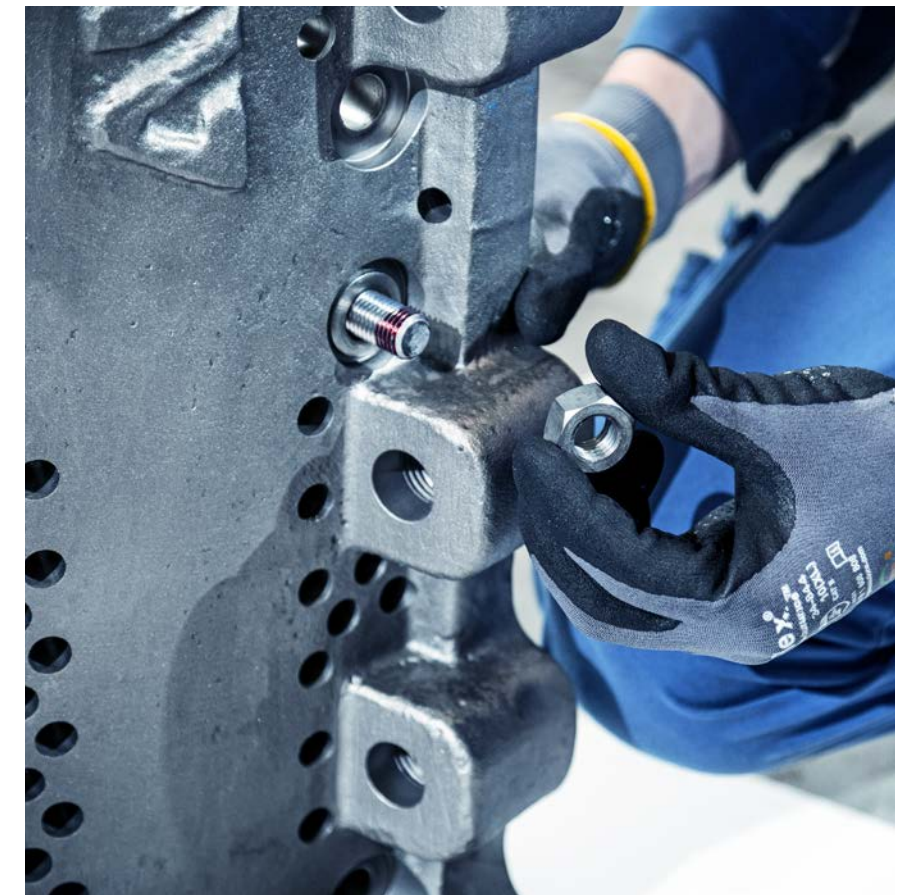
Homanit, Germany: "There's no argument against it."

For the last 23 years, German fiberboard producer, Homanit, has been using the same 3 plug screw feeder compression housings that ANDRITZ delivered back in 1994. And they had no reason to change. As maintenance chief Achim Klein pointed out, "They worked great - we were happy!" But after more than two decades of successful operation, Mr. Klein has done exactly that - changed. And he recommends that you do, too. This is the story of why.

In the medium- and high-density fiberboard (MDF & HDF) industry, wood fibers mean money. But they are also abrasive and, over time, they will wear out your machinery. Especially in conical plug screw feeders (PSF), which suffer heavy wear on the inner surface of the pressure housing.

In the past, the only way to manage this was to run the unit until the flutes on the pressure housing wore out, then send it away to have more metal welded onto the worn-out flutes. Over and over and over again.

It was the same story at Homanit. Until now.



Easy and fast installation of AdvaProtect segments.

No turning back

Homanit operates three MDF/HDF plants, two in Poland and one in Germany. At its plant in Losheim, Germany, the firm produces 60 million m²/yr of high-density (820-870 g/m²) fibreboard (HDF) for doors and furniture. As part of this production, Homanit had been running its PSF until the pressure housing needed repairs – just like everyone else does – for more than 20 years.

But now Losheim is the first plant in the world that doesn't do it like everyone else.

Instead, they decided to try AdvaProtect Segments from ANDRITZ.

Homanit tested the first prototype AdvaProtect Segments from May 2018 to January 2019. And maintenance chief, Achim Klein, does not want to go back to the old way. "I will definitely approve a full order. There is no argument against it."

And he is no easily-persuaded, inexperienced player. Klein started working as an apprentice at Losheim in



"I will definitely approve a full order. There is no argument against it."

ACHIM KLEIN
HOMANIT Losheim, Maintenance chief



1984, around 11 years before the current MDF/HDF line started up in 1995. After 34 years, he has progressed to become Losheim's Director of Mechanical Maintenance and is today in charge of 20 mechanics and 8 apprentices in 3 departments. And he picked up a Master's Degree in Industrial Metalworking on the way.

So he knows what he's doing.

And he had no need to change how the plant runs its PSF. "We always operated with 3 standard PSF pressure housings from ANDRITZ – one in use, one being repaired and one in storage. We would run them for 3,000 to 3,500 hours each time before repairing them again. They worked very well."

SO WHY DID THEY CHANGE, IF THEY DIDN'T NEED TO?

Klein says "As soon as I saw the blueprints, I liked it. I was quickly convinced of the technical concept. The material is comparable with refiner plates, so I knew they would last a long time. Also, we can do it ourselves in-house, instead of having to send them away and having to wait weeks and months." As Technical specialist Dietmar Ulm, Product Manager for ANDRITZ plug screw feeders, added, "That can create a feeling of uncertainty, because the equipment is away from the plant."

Like new – every time



Delivery of a new set of outlet segments.

"It's an interesting system, because there's so much less wear. It's a great concept from start to finish, really good."

Instead of the traditional way of maintaining the pressure housing, where you repair damage by welding on more metal, ANDRITZ's new AdvaProtect Segments give you a genuinely brand-new housing interior every time, fresh from the factory. Simply remove the old ones and fit the new ones. No risk of cracks or deformation of the housing. And instead of 2 months, it takes 2 hours, and costs much less. As Ulm pointed out, "Homanit saw that AdvaProtect Segments worked out

much cheaper" than the standard procedure. Two mechanics unscrewed the used AdvaProtect Segments, cleaned the housing, and bolted the new ones on. No mystery.

Results from this test installation included zero cracks, plus the same motor load and dewatering as with a standard compression housing, but obviously with a far longer operational lifetime.

Achim Klein added "This was the prototype trial and we didn't even need to change the inlet ring [this time], so that's a third of the costs gone." Even after the 5,000-hour trial run, the inlet ring was still almost as good as new – the replacement timing indicators built into the fitting bolts automatically show whether the segments are still usable or not. On the inlet ring at Losheim, the 5,000-hour old bolts were not very different from new (see photo).

THAT IS PART OF HOW ANDRITZ KEEPS THE COST DOWN

Another cost factor is that the AdvaProtect segments are sold almost as they come off the production line. They are cast in hard steel at ANDRITZ's foundry in Pennsylvania, USA, which also makes the company's Durametal refiner plates. And the casting is so accurate that the segments require almost no machining after production.



Fixation bolt with new (right) and worn wear indicator.

Which explains why Achim Klein said "For me, I wanted them for technical reasons. The business guys wanted them for cost reasons. It's not often that the technical team and the business team all agree." Ulm says the AdvaProtect Segments themselves cost almost 40% less per complete refurb cycle, and when you add in the extended operational lifetime between refurbs, he estimates that the real saving over time is actually close to 60%.

"It's a clear improvement, a real advantage. It's cheaper than welding them. They also last longer."

ACHIM KLEIN
HOMANIT Losheim, Maintenance chief

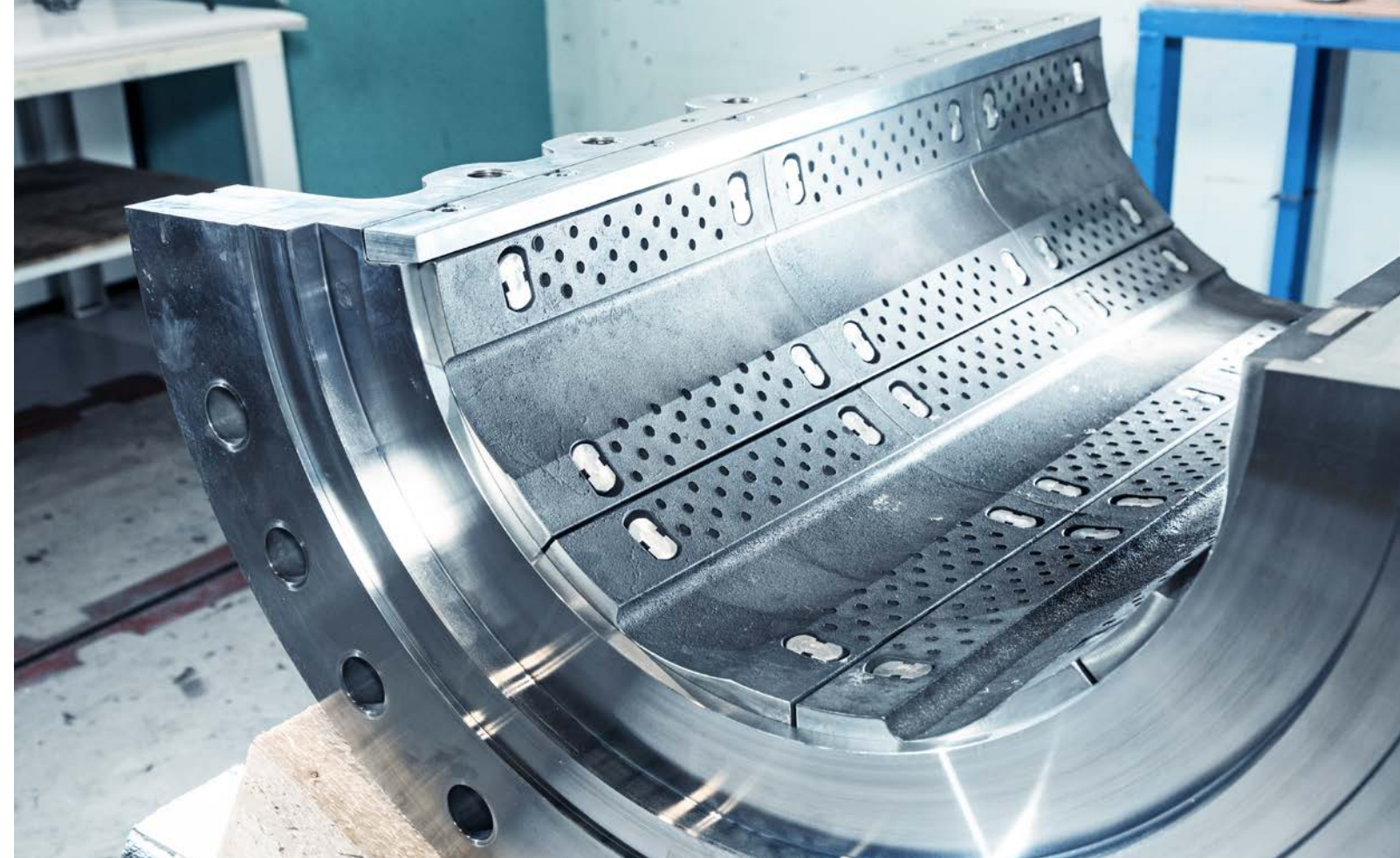
There is one fairly major spend involved with AdvaProtect Segments, as they require a new pressure housing when switching to the new set-up. However, this is a one-time only investment. And even including this, the total investment and the ongoing running costs are dramatically lower than with conventional plug screw presses.

Klein explains: "It's a clear improvement, a real advantage. It's cheaper than welding them. They also last longer." And he is backed up by Homanit's Production Manager, Andreas Niehren, who has worked in the industry for nearly 2 decades in different parts of the world, including the USA. "We got 5,000 hours instead of the usual 3,000-3,500, without consuming any more energy. We've got higher availability and less downtime and all production guys want that."

Klein adds: "So, with a wet summer, they could last even longer."

It's perhaps not surprising that both the technical and financial teams at Homanit liked the package!

"We made the decision [to approve the prototype trial] in March 2018 and installed them in May. We checked them twice, they were OK. In fact, if we hadn't planned



Compression housing assembled with new AdvaProtect segments.

this shutdown [of the whole plant, for regular maintenance], I would have kept running them."

One possible technical concern was dewatering performance, because some of the holes in a traditional PSF pressure housing are absent, as the AdvaProtect segments use some of those spaces for fitting bolts. Ulm says, "this solution is perfect for southeast Asia, where dewatering isn't a major factor."

However, it also proved to be suitable in Europe at Homanit, where the dewatering performance is the same as the previous set-up, with the dryer running at the same temperature as before. As Klein reports: "the dewatering works fine." In fact, he says "I don't see how they could be improved."

As a result of the whole experience, we have re-built a relationship of trust," says Ulm. Not that there was much of a problem before – the two firms have always had a good relationship – "ANDRITZ has been one of our main partners at Losheim for 20-25 years. We've always worked well with them," says Klein.

Despite this, ANDRITZ had been absent from Homanit's PSF section for years – but that has all changed now. After many years of running Losheim's PSF its own way,



"As a result of the whole experience, we have re-built a relationship of trust."

DIETMAR ULM,
ANDRITZ Product Manager

Homanit has decided to order its next screw feeder refurbishment from ANDRITZ. Klein says "I told our Managing Director long ago that I wanted the AdvaProtect Segments. He said if we order it, we'll think about ordering it for all 3 of our plants."

WHAT ABOUT YOU?

To illustrate how he feels very simply, Achim Klein tells us that if someone asked him about AdvaProtect segments, he'd say "Buy them! I recommend them 100%."



THE ANDRITZ REFINING SERVICE TEAM GLOBAL SUPPORT FOR ANY KIND OF REFINER

We also want to take up your challenges! For more information about ANDRITZ's services, please visit andritz.com/refiner-service for details.

EUROPE

ANDRITZ AG
Vienna, Austria
p: +43 50805-0

NORTH AMERICA

ANDRITZ Ltd.
Brantford, Canada
p: +1 519 754-4590

SOUTH AMERICA

ANDRITZ Brasil Ltda.
Curitiba, Brazil
p: +55 41 2103-7601

ANDRITZ.COM



All data, information, statements, photographs and graphic illustrations in this leaflet are without any obligation and raise no liabilities to or form part of any sales contracts of ANDRITZ AG or any affiliates for equipment and/or systems referred to herein. © ANDRITZ AG 2019. All rights reserved. No part of this copyrighted work may be reproduced, modified or distributed in any form or by any means, or stored in any database or retrieval system, without the prior written permission of ANDRITZ AG or its affiliates. Any such unauthorized use for any purpose is a violation of the relevant copyright laws. ANDRITZ AG, Stattegger Strasse 18, 8045 Graz, Austria. PEW_PB_success-story_Losheim.EN.04.19