

www.kuhne-group.de



LIST OF CONTENTS

01 Smart Sheets dies BDFI
now also with internal deckling

02 Go West: North America
*In the past couple of years,
KUHNE has been continuously
reinforcing its market activities*

03 Central Asia
*KUHNE sold two extrusion lines
to Turkmenistan*

04 ABS Sheet lines
*KUHNE Smart Sheets was able to
upgrade its reputation as reliable
and innovative partner in the field
of ABS sheet lines*

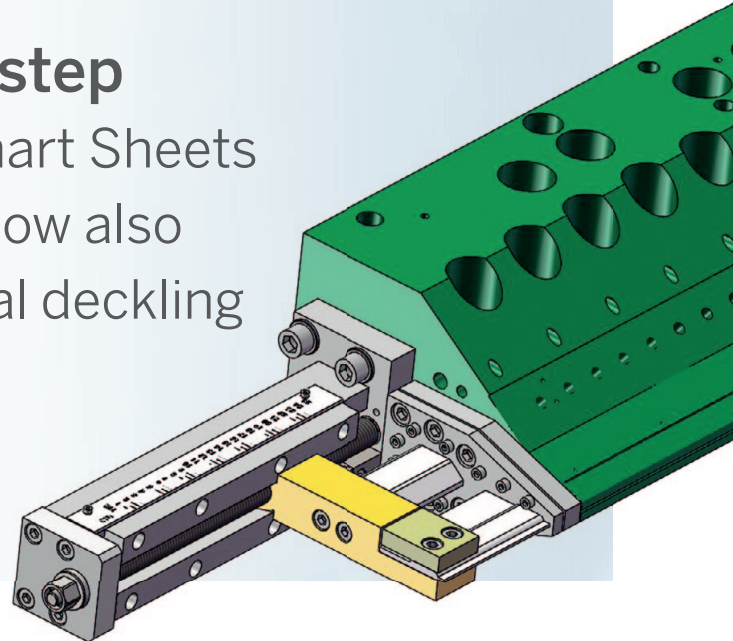
06 Recruiting
*KUHNE at the Career Fair of the
Bonn-Rhine Sieg University*

07 Dual apprenticeship
*Education delegation from
Ecuador visits KUHNE*

08 It's all about the technology
*Unconventional moves in order
to solve problems*

The next step

KUHNE Smart Sheets dies BDFI now also with internal deckling



For more than 60 years KUHNE has been designing and building flat sheet dies – based on the first patent of the so called „coat-hanger-technology“.

Many thousands of dies have since been sold and are in operation worldwide. The deckling of these dies is always an outside one, consisting of two externally positioned metal blades, that are moved manually, in order to adjust the width of the die opening.

Since beginning of 2018, Smart Sheets is now also offering a different type of die: Based on the T-channel design, the product portfolio has been enlarged by a flat sheet die with internal deckling. Both blades are individually adjustable from outside and during production. Especially the production of PET films requires a preferably short distance between roll nip and die lip due to the melt viscosity. Because of externally positioned blades a few, but decisive millimeter can be lacking. This also applies to other, easy flowing polyolefins. The slim design of the BDFI in the area of the die lips gu-

arantees the shortest possible distance to the roll nip, in which the die can now enter more deep. Thus – and because of the uniformly flow behaviour – a uncontrolled, too early contact of the melt to the cooling roller is prevented.

Regarding the design of the first of these new tools, KUHNE focussed in particular on impermeability. The new die, type BDFI, is already successfully producing at several customers worldwide. It is actually available in the width range between 800 and 2.000 mm.



**In case of interest,
please contact us:**
KUHNE Smart Sheets I Sales
Phone: +49 2241 902-0
info@kuhne-group.com



KUHNE – Go West!

In the past couple of years, KUHNE Group Smart Sheets has been continuously reinforcing its market activities in Northern America. This applies to thermoforming applications – in both Inline- and Offline mode – as well as in the field of sheet extrusion for technical applications; one of the many core competences of KUHNE GmbH.

One contributing measure was for example, the Cup Day in June 2018 in the US. In collaboration with KIEFEL Thermoforming, coffee capsules out of PP/EVOH were produced on a 7-layer barrier line inline with a thermoformer. The exceptionally successful presentation found huge interest in the US market and attracted many visitors.

Lots of progress has been achieved in regards to our American expansion, in large part due to the success of the Cup Day. As a result, KUHNE will be delivering two similar barrier lines with the same production purpose as the demonstration line at the Cup Day to our long-lasting customer Coveris in the US.

KUHNE Smart Sheets is also expanding its sheet extrusion business in the US; a leading European sheet producer and continuing customer recently ordered a machine using HD-PE and PP. The delivery took place in July to the American east coast.

It goes without saying that we also offer all other machine variants out of our portfolio: for example, offline machines with winders, geomembrane lines with the best thickness tolerances or special lines for lamination film. Our machines are fully capable of using all known polyolefins.

With its partners in Rhode Island – Pro-Systems Integration and US Extruders – KUHNE has created the best conditions

for a strong and stable long-term market presence in North America. This is clearly represented by the regular participation at the yearly NPE show in Florida, where increasingly more interest and support has been expressed towards KUHNE throughout the years.

Feel free to contact us:

Frank Alexy

KUHNE Smart Sheets

Phone: +49 2241 902 125

Cell Phone: +49 163 860 49 67

alex@kuhne.de



KUHNE Smart Sheets:

Turkmenistan as newest reference

In the first quarter of 2018, KUHNE sold the first two extrusion lines to Turkmenistan. The former sovjet republic is a landlocked country in Central Asia and has close to 6 million residents. Neighbor countries are – among others – Iran or Afghanistan.

The companies MEHTIYEW and HALK HAZYNA therefore have brought the first German flat-film extrusion lines into their home country.

The mono layer and coextrusion line both mainly process Polypropylen and the used raw materials all come directly from Turkmenistan. That input-material has already been used on numerous KUHNE-lines

in Russia with high-quality results for some time.

Both machines are based on the for many years well-proven high-speed technology with direct drives which saves both space and energy. Thanks to the water-cooled motors, the lines also are emitting less noise.

The produced films are taken for internal use for thermoforming as well as the sales within Turkmenistan and other CIS staates. For that, a prospective customer already could be found: A russian customer is gladly willing to buy the films from our turkmenistan partner with the media-tion from KUHNE.



Impression of Ashgabat – capital city of Turkmenistan





Always a step ahead

KUHNE ABS Sheet lines

In the past 18 months KUHNE Smart Sheets was able to strengthen and upgrade its excellent reputation as reliable and innovative partner in the field of ABS sheet lines. Within that period, six known companies from Germany and Austria have already ordered new extrusion-sheet lines from KUHNE.

Even though the material to be processed is always ABS; the applications are numerous: The sheets are used in the automotive industry or for bathroom and kitchen furniture. In cars the thermoformed, mostly colored sheets are used in- and outside, so not only for the bodywork. This way, later costly varnishing can be spared. Some application examples are municipal cars, ambulances or postal cars, but also trucks and caravans. ABS sheets become more and more important for e-cars, also. The usage of plastic instead of metal in the production is crucial as weight is reduced and therefore reach of the car enlarged.

The KUHNE lines produce multi-layer sheets with gloss effect and can also handle high percentages of regrind material. The thickness range goes from 0,5 up to 8 mm and a common machine width is around 2 m. In order to produce the optical sheets in an optimal way, KUHNE is designing them specifically towards the final product. The inhouse made extruders do not need a pre-drying, the melt temperature is kept low and a unique drive-technology in the rollstack ensures that no marks can be found in the final sheet. Special devices support a fast and easy roll change – for example when using embossed rollers. The drive and gear concept strictly follows the European energy class IE3, in which waste heat losses are reduced to the lowest level thanks to KUHNE'S insulation concept. The later part of saw, milling and stacking can be executed manually, semi- or fully automatic on request. And in order to avoid dust, some of these lines are designed as clean-room machines in the rear part.

Throughout the years, KUHNE has kept and developed his own high standard for these lines – always in cooperation with its customers. Most of the six companies did not order their first KUHNE sheet line. The team of Smart Sheets with its know-how and experience is working hard on ensuring that it will not have been the last one either.





KUHNE at the Career Fair of the Bonn-Rhine Sieg University

On the 8th of November 2017, over 120 businesses from the surrounding area met up on the campus in Sankt Augustin together with students to exchange information, hold discussions and to get to know each other.

For the first time, KUHNE was amongst these businesses as well, on the lookout for new young talents.

Whether they're looking for a job, inspiration for their graduation paper, or an internship – KUHNE offers students and graduates a large variety of possibilities for their start into the work life or for gathering hands-on experience. Especially in the engineering field, KUHNE is looking for qualified graduates, who have high work commitment and are eager to learn new things.

The career fair offers great opportunities for businesses to have firsthand contact with applicants. Through such personal interactions, more insight is gained into both sides that would otherwise not

be possible with an anonymous pre-selection.

After such a successful fair where many interesting conversations were held and lots of new connections were made, it is certain that KUHNE will be present at this year's fair once again.

Career Fair 2018
Campus Sankt Augustin
Grantham-Allee 20
53757 Sankt Augustin

Wednesday,
14th of November 2018
10 a.m. – 4 p.m.



The export hit dual apprenticeship

Education delegation from Ecuador visits KUHNE

Teen unemployment is a worldwide issue. Germany is a positive exception in comparison to the average with only about 5 % teen unemployment. One major reason is the dual apprenticeship. The healthy mix of theoretical and hands-on experiences in a business has proven to be a very effective and successful education system.

In 2013, the DIHK started working with the Ministry of Education of Ecuador as well as with the Ecuadorian Chamber of Industry on an industrial education partnership program. Additionally, the DIHK has started working with a variety of associations from the private sector on this project as well. The project is designed

to support the educational reform of the work sector in Ecuador.

The goal is to change the apprenticeship to be more hands-on and practical. To achieve this, businesses and the economy are to be included more in the planning and execution of the apprenticeships. Hopefully, this will lead to the workforce achieving higher qualifications and raising the productivity as well as the competitive ability of the Ecuadorian businesses.

In June of 2018, a delegation from Ecuador came to Germany and visited a large variety of businesses that employ the dual apprenticeship in their workplace. Amongst these businesses was of course KUHNE,

being known in the region as long-term successful apprenticeship company.

After an introductory presentation of KUHNE and its apprenticeship program, a tour of the facility was conducted. During this tour, multiple apprentices and instructors were also interviewed and lively exchanges took place. The delegation members were especially interested in the industrial apprenticeships. They inquired about trade school and the fundamental education conducted there, as well as the training plan of the apprentices and the costs of a three-year apprenticeship in Germany.

The tour ended in the R&D department where the KUHNE machines were viewed with great interest.



Surrounded by the team from Ecuador: in front on the left: Kathrin Bunje, Area Sales Manager South America, center front: Kerstin Reineck, Human Resources KUHNE, rear center: Axel Werner, Managing Director and HR Manager KUHNE Group



Last, but not least: it's all about the technology!

Normally, pens are used for writing and gloves for wearing. Usually! At KUHNE, we also choose unconventional moves in order to solve problems. The initial idea and the technical path towards the solution are always in the focus.

Our picture shows the engine compartment of the car of a colleague, who could not continue his journey at first due to a leak in the gasoline line.

Fortunately, a KUHNE pen and a plastic glove were on board: The pen – no sur-

prise – fitted the gasoline seal perfectly, the glove fixed the whole thing and after only a few minutes, the colleague could continue his journey for more than 1000 kilometer.

At KUHNE – it's always about finding solutions!

IMPRINT

Publisher: KUHNE GmbH
 Einsteinstraße 20
 53757 St. Augustin, Germany

Phone: +49 2241 902-0
Service Hotline: +49 180 5902099
Telefax: +49 2241 902-180
E-mail: verkauf@kuhne-group.com
Internet: www.kuhne-group.com

No part of this publication may be reproduced without permission in writing from KUHNE GmbH.