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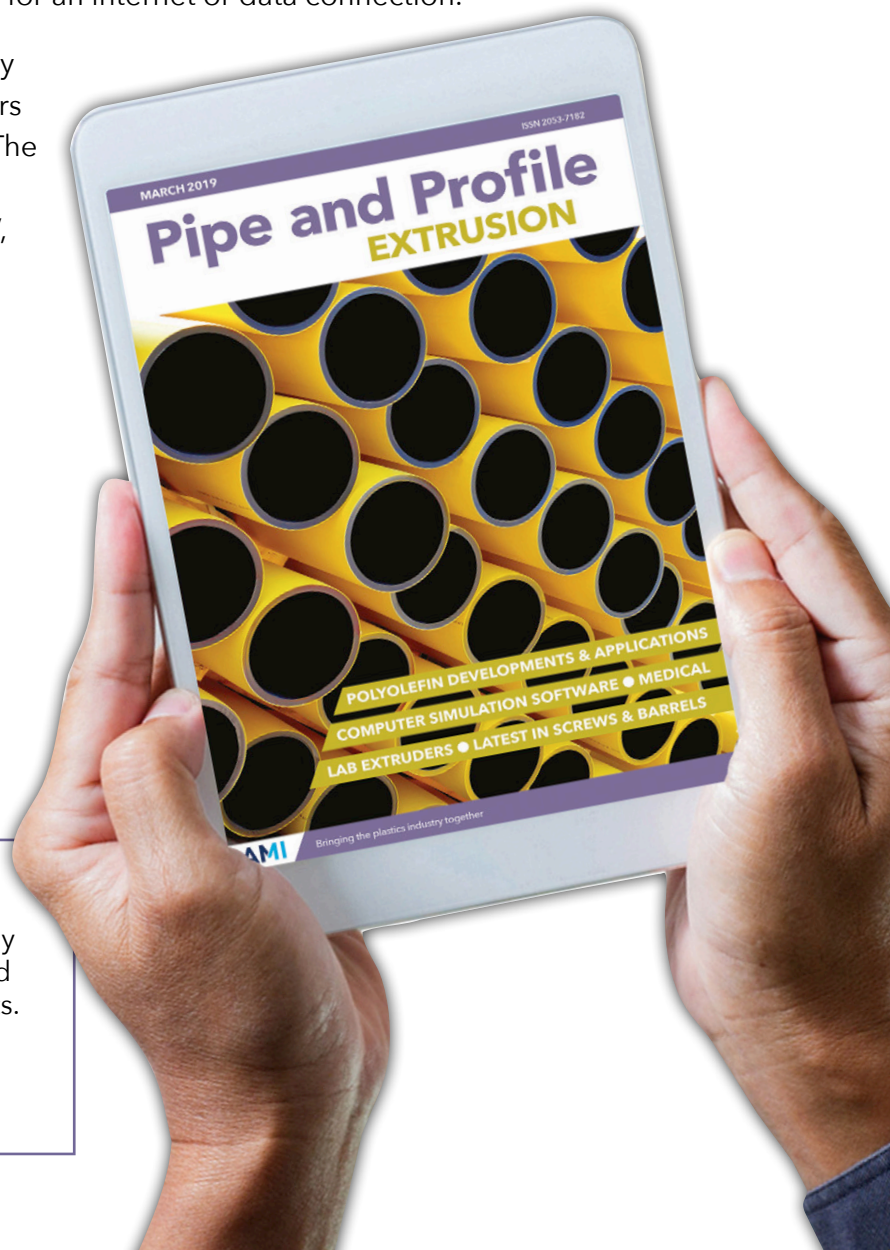
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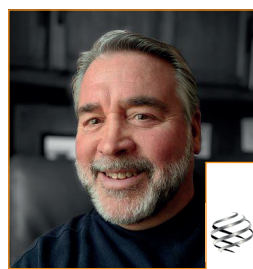
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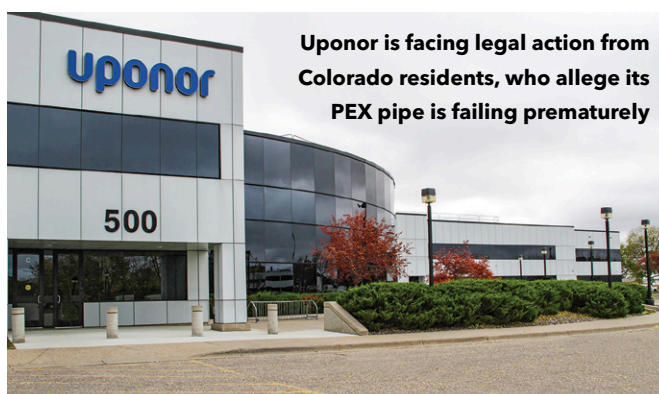
Uponor faces US lawsuit over PEX pipe "defects"

Pipe manufacturer Uponor is facing a class-action lawsuit in the USA from residents of Colorado.

The case, brought in Colorado District Court in July, alleges that PEX pipe supplied by Uponor "suffers from design and/or manufacturing defects that cause premature damage, degradation, deterioration and failure".

The plaintiffs - two couples living in Colorado - say Uponor PEX pipe in their homes is degrading prematurely. They allege that Uponor's manufacturing process is to blame. According to the action, Uponor colours its PEX pipe by adding a red or blue coating to the outside of the tube - while other manufacturers incorporate pigment throughout the pipe. To make the coating stick to the PEX pipe, Uponor heat-treats the surface, says the action: "While this improves

IMAGE: UPONOR



adhesion qualities...it is an oxidation process that destroys the antioxidants [within the pipe], subjecting [it] to actual damage and premature failure."

This causes oxidative degradation, micro cracking, leaks and other damage, said the plaintiffs.

In response, Uponor has filed a motion to "compel arbitration, or dismiss the complaint and class allegations". It says that "claims should be dismissed because Plaintiffs have failed to plead facts establishing the essential element

of damages". The motion includes a statement from Stacey Beissel - manager for claims, risk and insurance for Uponor North America. In her submission, Beissel states that Uponor had previously received no warranty claims over the type of pipe installed in the plaintiffs' homes.

Although the case has only been brought by two households, the plaintiffs claim that "thousands of individuals" are likely to have been affected by the problem. The plaintiffs are seeking a jury trial.

IN BRIEF...

US-based private equity firm **Apollo Global Management** has bought PVC manufacturer **Kem One**. The terms of the deal have not been revealed. The sale is expected to be completed by the end of this year. Kem One employs around 1,400 people and has eight production sites in France and Spain.

www.apollo.com
www.kemone.com

Next Generation Recycling (NGR) of Austria has expanded its presence in the USA by moving to larger headquarters. It has moved to a larger site in Atlanta, Georgia that is close to the airport. Peter Schneider, president of NGR Inc, said the company would now offer a larger portfolio - as well as more availability of spare parts. A C-Gran machine will be added to the test centre in May 2022, allowing customers to process and test recycled materials.
www.ngr-world.com

Guide helps avoid conduit damage

A PPI guide helps installers calculate safe pulling loads for HDPE conduit



IMAGE: PPI

US-based Plastics Pipe Institute (PPI) says that a new guide will help installers to calculate safe pulling loads - and avoid damaging HDPE conduit.

The technical note, TN-63, provides the equations needed to calculate the Safe Pull Strength (SPS) for HDPE conduit, plus tables of pre-calculated SPS values for typical HDPE conduit wall diameters and thickness types. It also includes guidance on how to derate the SPS for elevated temperature

installation and time-under-tension considerations.

"When pulling HDPE conduit into place, an increasing axial tensile load will be exerted on the conduit," said Patrick Vibien, director of engineering for PPI's power & communications division. "If the SPS is exceeded during installation, the conduit may permanently deform at some location along its length."

TN-63 can be downloaded free from PPI's website.

➤ www.plasticpipe.org

US government sues Aquatherm in Oregon over "leaking PP pipe"

Polypropylene pipe maker Aquatherm is being sued by the US government for alleged failure of its PP pipe at a federal building.

The facility - the Edith Green-Wendell Wyatt Federal Building, in Portland, Oregon - is an 18-storey structure that houses around 1,200 employees of various federal agencies. The government alleges that Aquatherm's PP pipe - though supposed to last for 50 years - began to leak five years after it was installed in the building as part of a renovation.

The government engaged an independent consultant, HDR, to investigate the recurring leaks. HDR determined that the Aquatherm pipes were "corroding from the inside because of oxidative degradation" - a

problem that was likely to worsen over time. It recommended replacing all Aquatherm pipes in the domestic and hydronic systems.

The case was filed with Oregon District Court in March. As well as Aquatherm, the lawsuit names several other defendants including pipe distributors Aetna and Harrington Industrial Plastics.

Recently, the defendants requested a more "definitive statement" on the nature of the allegations, which would allow it to "begin to frame a response". However, District Judge Michael Simon denied the request.

The US government is seeking a jury trial, and repayment of the cost of replacing the pipes "in an amount to be determined".



IMAGE: M.O. STEVENS, CC BY-SA 3.0

Cascade acquired for \$425m

Cornerstone Building Brands, a leading manufacturer of exterior building products in North America, is to buy Cascade Windows for US\$245 million.

Cascade is an independent manufacturer of PVC windows and doors, serving the residential new construction and repair and remodelling markets. It has around 800 employees at six manufacturing and three distribution locations.

Cornerstone's products include PVC windows and siding.

➤ www.cornerstone-buildingbrands.com

ILC Dover grows in medical

US-based ILC Dover is to acquire Flexan, a manufacturer of medical equipment including a variety of extruded tubing products.

Flexan, a contract design and manufacturing organisation based in Lincolnshire, Illinois, specialises in silicone, thermoplastic, and

rubber components and devices. Its products include single-, multi- and micro-lumen tubing, co-extrusions, profiles and specialised structures such as braiding.

"Flexan's expertise in silicone moulding and thermoplastic extrusion enables the company to

deliver mission-critical components and devices to medical device manufacturers and ultimately improve patient care," said Andre Moura, managing director at New Mountain Capital, the owner of ILC Dover.

➤ www.ilcdover.com

➤ www.flexan.com

Polypipe raises sales in H1

UK-based Genuit - the new name for Polypipe - reported improved results in the first half of 2021.

Sales reached nearly £296 million (US\$406m) - a 32% increase compared to H1 2019, and around 70% higher than the same period in 2020. This produced a

pre-tax profit of nearly £34m (US\$47m) for H1 2021, nearly 8% higher than in 2019.

Revenue and profits growth in residential systems exceeded those in commercial infrastructure. The company says outlook for the second half of the

year is "encouraging".

"Strong market demand has seen momentum continue into the second half and we expect full-year performance to be ahead of previous expectations," said Martin Payne, CEO of Genuit.

➤ www.polypipe.com

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Italian machinery sales rise in first half of 2021

Italy's machinery sector has moved ahead in the first half of 2021.

Figures from trade association Amaplast show an 11% increase in sales. Domestic sales have remained high, while foreign sales are mainly for replacement parts, it said.

Companies also saw improved order books, recording a 46% growth compared to the first half of 2020. This has been driven mainly by demand from Italian customers (up by 134% in the last quarter

alone) – but there is also positive demand from abroad, for both machinery and replacement parts (up by 58%).

"Given this trend, an average of 6.4 months of production are already assured," said Amaplast.

Amaplast has also completed a national statistical survey among nearly 350 of its members. The companies employed 13,000 people and produced revenues of €3.7 billion (US\$4.2bn) in 2020. Most are small companies: three-quarters of them

generate less than €10m (US\$12m) in revenues.

Large companies, which represent 26% of the total by number, generate 77% of the turnover.

Extruders represent the largest turnover for the sector with 17% of the total. For comparison, this is followed by ancillaries (12%), injection moulding (11%) and blow moulding (7%). Recovery and recycling lines, and rubber processing machines, each account for around 6%.

➤ www.amaplast.org

ADS posts increase in Q1 2021

US-based pipe manufacturer ADS raised sales and profits in the first quarter of this year.

Sales rose 32% to nearly US\$670 million, while profits increased 9% to around US\$77m.

Domestic pipe sales rose about one-third during the period. The profit rise was mainly due to higher sales volumes and prices in pipe and other products said Scott Barbour, president and CEO of ADS.

➤ www.adspipe.com

Wienerberger acquires two pipe makers



IMAGE: WIENERBERGER

Austria-based Wienerberger has acquired two pipe companies in the UK and Ireland.

Cork Plastics of Ireland and UK-based FloPlast both supply plastic rainwater, drainage and plumbing products. FloPlast operates as the UK distributor for Cork Plastics. Between them, the companies employ 370 people in three locations, with revenues of around €100 million (US\$118m). The acquisition price was not revealed.

Wienerberger says the acquisition will

broaden its portfolio and allow it to become a full system provider for managed grey and stormwater solutions in the residential sector.

"FloPlast and Cork Plastics have a strong focus and experience in the renovation, maintenance and improvement (RMI) segment," said Heimo Scheuch, chairman of Wienerberger. "We can now provide a portfolio that spans from water collection and transport to retention and filtration."

➤ www.wienerberger.com

VDMA members keeps growing in China

VDMA, which represents Germany machinery manufacturers, says that its members are continuing to expand their workforces in China.

The results were revealed in VDMA's latest personnel and salary survey – which tracks salary development, recruitment, employee retention and personnel trends in China.

Most responding companies said they had recovered well from the 2019

crisis. As in earlier years, members with less than 8% turnover of senior staff performed better than participants in the German Chamber's annual survey.

While English proficiency has improved, the biggest challenges remain the recruitment of qualified staff and rising labour costs. Covid-19 led to fewer visits from headquarters – and a lack of technical and management support.

There is also a lack of awareness over upcoming tax changes on individual income tax for foreigners working in China.

"One of our main tasks is to share information and prepare our member companies for changes in their business environment," said Florian Mikulasch of VDMA.

➤ <https://www.vdma.org/plastics-rubber-machinery>

North America: Q2 machine sales down compared to Q1

Sales of primary plastics machinery in North America fell for the second consecutive quarter – but rose compared to the same quarter in 2020.

According to the US-based Plastics Industry Association, the value of sales in Q2 of this year was just under US\$321 million – a fall of just over 4% compared to Q1. However, it was around 21% higher than Q1 of 2020.

The value of single-screw extruders increased by 33% compared to Q1 2021, but that of twin-screw extruders fell by 25% (and injection moulding machinery fell nearly 5%). Compared to Q2 2020, deliveries of single-screw extruders rose 38%, while twin-screw extruders rose by 32% and injection moulding machinery by nearly 20%.

“While new orders of plastics equipment have been increasing, ongoing supply chain issues are causing longer delivery timelines,” said Perc Pineda, the organisation’s chief economist.

This, he said, explains the fall in deliveries in the second quarter. However, this is the third consecutive quarter that plastics equipment deliveries were higher than they were one year earlier.

“This means the underlying trend in demand remains upward – in sync with the economic recovery,” said Pineda.

Q2 exports fell by nearly 7% to around US\$368m, compared to Q1 2021. Mexico and Canada remained the top export markets of plastics

machinery from the USA – accounting for about 48% of all foreign sales. Imports rose by 3.5% to US\$874m, resulting in a US\$507m trade deficit.

“Until supply chain issues are resolved – and production lead times return to normal – expect to see fluctuations in quarterly shipments of plastics machinery,” said Pineda.

In the organisation’s latest quarterly survey of plastics machinery suppliers, nearly 93% of respondents expect conditions to improve or hold steady – the same result as in Q1. Over the next 12 months, 79% expect market conditions to be steady-to-better – lower than the 93% of respondents who answered this way in Q1.

➤ www.plasticsindustry.org

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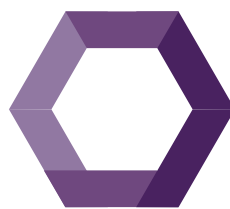
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Taking a closer look: latest in pipe inspection

Techniques including radar measurement and vision sensors are used to assess pipe quality - while ongoing research attempts to understand the factors that affect pipe durability and lifetime



IMAGE: UPONOR

Inspecting extruded pipe for characteristics such as ovality, surface defects and pressure performance is vital in order to ensure that it is suitable for delivery.

A wide range of machinery - ranging from vision systems to physical test rigs - is available for this. At the same time, fundamental research continues to uncover more details that affect factors such as pipe lifetime.

Pixargus says that its AllRoundDia DualVision system has helped **Uponor** to speed up the production of composite pipes.

In Zella-Mehlis, in Germany, Uponor coats thin aluminum tubes with several layers of plastic. This produces a multilayer composite pipe for heating and drinking water applications - made at rates up to 60m/minute.

"We are the competence centre for Uponor's multilayer composite piping," said Stefan Häfke, quality manager at the Zella-Mehlis location of Uponor.

When Uponor introduced new production technology for its OD 16 to 32mm pipes, production speed almost doubled. The inspection systems used in quality control were unable to cope with this. So, in 2020, the company invested in new inspection technology from Pixargus - its new Two-in-One system called AllRoundDia DualVision (DV).

Pixargus says the compact, versatile instrument is the first 360-degree inspection system for round products. It combines surface inspection and dimension measurement within one sensor head and shows the measured data in real time on the display. The first system has been in operation at Uponor in Zella-Mehlis for one year.

The composite pipes are used in areas such as service ducts and floor heating systems - and must have high technical integrity. Cracking on the pipe surface, for example - resulting from fused foreign substances - may affect the pipes' shape-retaining capacity and cause them to break.

Main image:
The AllRoundDia DualVision system from Pixargus has helped Uponor raise production of composite pipes



Above: PSILab has installed Sigma pipe pressure testing equipment from Sciteq

"To avoid this, we need 100 per cent flaw detection – missing not a single spot of the surface," said Häfke.

The system is based on Windows, allowing it to be linked with components of the production line – enabling the control system to retrieve the quality data generated by the gauge.

"When a defect has been detected, we can immediately take action – switching automatically to the scrap mode, for example, to eject the defective product," he said.

Uponor uses the quality data to optimise the production process. Process parameters can be analysed over time. In this way, Uponor can see whether certain machine settings lead to more or fewer defects – allowing it to refine its recipes.

With AllRoundDia DV, Pixargus has optimised and adapted its earlier ProfilControl 7 technology to achieve a system that concentrates all its capabilities on the measurement of simple, round geometries.

"The system can measure the diameter and ovality, and inspect the complete surface area of round extruded products for a wide range of materials," said Michael Frohn, sales manager at Pixargus.

ProfilControl 7 uses an external encoder to send the scan signals to the camera, but the AllRoundDia DV does this using software.

"It was important to design a system that had no additional hardware. This makes the system very versatile, and it can be easily moved to another line," he said.

AllRoundDia DV uses 'real' LED light for surface inspection – rather than laser light. Laser triangulation allows round and oval contours to be measured gaplessly around their complete circumference. The optical sensors are able to capture 4 million pixels.

"This enables us to measure much more accurately and reliably," said Frohn.

After the successful commissioning of the first system, Uponor has ordered three more AllRoundDia DV systems.

Expanded testing

Dutch pipe-testing specialist **Kiwa** recently expanded its capacity by adding a new piece of equipment from **Sciteq**.

The new equipment offers a way to assess PE100-RC pipes, using a technique called aNPT – or accelerated notch pipe testing. This is similar to traditional NPT, but places the pipe in a detergent solution rather than water.

Kiwa has been involved in the standardisation of PE100-RC material grades for some time, using techniques such as Strain Hardening Test (SHT), the Cracked Round Bar (CRB) test and the accelerated Full-Notch Creep Test (aFNCT).

"We just needed a pipe test," said Ernst van der Stok, material scientist at Kiwa. "Besides the Point Load Test (PLT), the aNPT is a great way to quickly assess PE100-RC grades."

Kiwa found that it needed to expand its capacity due to a number of new standards for PE pipe being published.

"Our current equipment – for PLT – was already from Sciteq," said van der Stok. "For the new equipment, we had many specific requirements."

Separate to this, US-based plastic pipe testing laboratory **PSILab** has installed Sciteq's new Sigma equipment – which allows hydrostatic pressure testing of a range of pipe.

The modular pressure series uses a dynamic control pressure system (DCPS). DCPS controls pressure inlet flow using two solenoid valves in series, rather than a single valve. This boosts high flow into the pipe at the start of the test – using one valve – and later decreases the flow by using both valves. Every pressure increase is then regulated in fine increments until the set pressure is reached.

Thomas Gedsig Nielsen, technical manager at Sciteq, said: "With this technology, we are able to deliver versatile pressure test equipment."

The Sigma system is controlled via intuitive browser-based control software, which can be operated from any browser-enabled device. He says that the system is flexible enough to test a wide variety of pipe materials and sizes with differing internal pressures.

High accuracy

NDC Technologies has introduced a new range of devices for single-axis diameter measurement of extruded products such as pipes and cables.

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Right: NDC's AccuScan Pro series allows single-axis diameter measurement of products such as pipes

optical engine and electronics platforms that underpin its existing Beta LaserMike AccuScan family of gauges. Designed with a compact footprint, AccuScan Pro offers high versatility. It can be integrated into the process for real-time control of product diameter or used as a stand-alone solution for off-line diameter applications.

Manufacturers benefit from higher product quality and material savings, says the company. AccuScan Pro devices can be used to measure plastic pipe, hose, tube and other extruded or drawn cylindrical, flat or unique profile products.

Devices in the series measure product diameters up to 100 mm across a range of applications – either online or offline. Two or more devices can be stacked together to measure larger diameters and perform single-scan flaw detection of lump and neckdowns.

The series also supports a variety of communication protocols for easy integration into processes.

Testing review

Pipe testing – especially that of estimating potential pipe lifetime – is a thoroughly researched academic subject. Recently, for example, Canadian researchers assessed the advantages – and disadvantages – of a variety of long-term testing methods for corrugated high-density polyethylene (HDPE) pipe.

The researchers, from the department of civil engineering at the **University of Sherbrooke**, addressed a number of issues – including the use of recycled materials, long-term durability and an overview of mechanisms that affect pipe lifetime.



“HDPE has become a material of interest for culverts and drainage pipelines as a result of its numerous advantages,” said the researchers. “The issue of service-life expectancy of pipes made with recycled versus virgin resins has been the focus of [several] research studies.”

The research was carried out in collaboration with Quebec’s Ministry of Transportation to assess the durability of HDPE pipes made by local manufacturers, using recycled and virgin resins.

A paper in *Engineering Fracture Mechanics* assesses the pros and cons of a range of tests for creep rupture strength, long-term stress crack resistance and long-term oxidation. For instance, it says the HDB test is most commonly used to estimate long-term hydrostatic strength of pipes – but does not reflect the actual working conditions of corrugated HDPE pipe for transportation infrastructure applications, where the pipe is not subjected to internal stress.

“This paper is intended as a reference resource



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for HDPE pipe engineers and researchers. They may consider which method of testing HDPE pipes is the most suitable," said the researchers.

Creep behaviour

One common mode of failure in HDPE pipe is creep. Researchers at the **University of Memphis** in the USA have simulation to model creep behaviour in HDPE – including pipe systems.

The researchers tested the material at a range of temperatures (which were chosen based on the service temperature range of automotive fuel tanks – another key application). As temperature increased, creep strength fell, while both creep strain and creep strain rate increased.

The team used several methods to estimate the effect on materials. For instance, the Larson-Miller parameter – which is widely used for metallic materials – was able to correlate time to rupture, stress, and temperature data of HDPE. Similarly, the Monkman-Grant relation was used to correlate minimum creep rate and time to rupture.

Some longer-term creep tests were also conducted at room temperature to evaluate the accuracy of extrapolation of the short-term creep test results to longer creep life predictions.

"The models used – based on the data presented – can be used in the design of parts and components made of HDPE where creep failure may be a concern," said the researchers, in a paper published recently in *Polymer Testing*.

Buried pipe

Chinese researchers have investigated the mechanical behaviour of buried DN110 PE pipe – with a scratch defect – under land subsidence, using a 3D finite element model.

Parametric effects – including soil gravity, operating pressure and land subsidence displacement – were investigated, to analyse the significance of each factor on mechanical stress.

Afterwards, the land subsidence displacement was chosen as the evaluation index of the ultimate bearing capacity of the pipe. The researchers developed a model to assess the relationship between the land subsidence displacement and other parameters.

"A scratch causes stress concentration at the defect – which makes the pipeline more hazardous

under the coupling action of external forces and internal pressure," said the researchers, from **Southwest Petroleum University** and **Beijing Jiaotong University**.

The researchers propose to use land subsidence displacement as an evaluation index of the ultimate bearing capacity (UBC) of pipelines. The findings were published in *Engineering Failure Analysis*.

Radar measurement

US-based Jet Stream – a manufacturer of construction-grade pipe systems – is using a Warp radar system from **Inoex** to monitor pipe diameter.

One of Jet Stream's specialties is C900 PVC pipe for high pressure water distribution, in diameters of 4-24in – which must not be made out of specification.

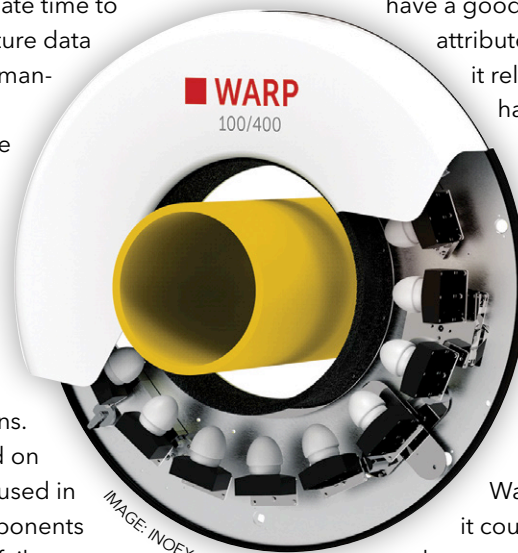
Before using a Warp system, Jet Stream did not have a good way to measure critical pipe attributes during production. Instead,

it relied on inspection after pipe had been sawed to its final length. The C900 line is quite long – with two cooling tanks, a haul-off unit and sawing station after the vacuum tank. This means that a lot of material was already in process if a problem was detected in inspection.

After Jet Stream installed a Warp unit after the vacuum tank it could see what was happening in the process in real time.

The company can now see impending problems immediately and adjust for them before non-conforming product is produced.

"We can also see how our process spread looks relative to the tolerances – and adjust so we don't give away all this free material," said Paul England, assistant plant manager at Jet Stream.



Right: The Warp system from Inoex uses a radar sensor to measure pipe diameter and wall thickness

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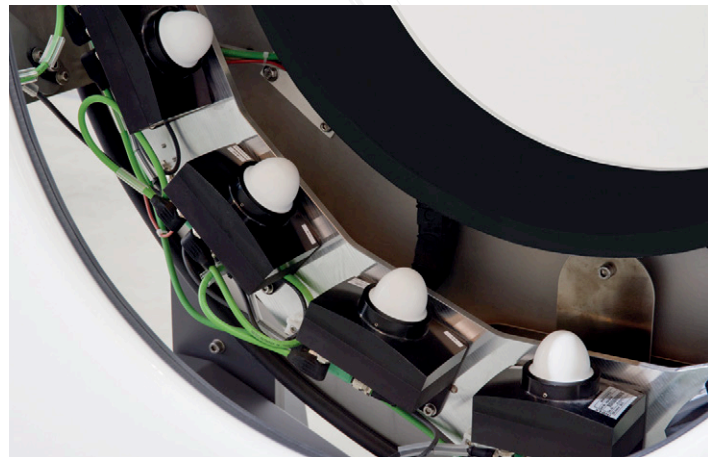
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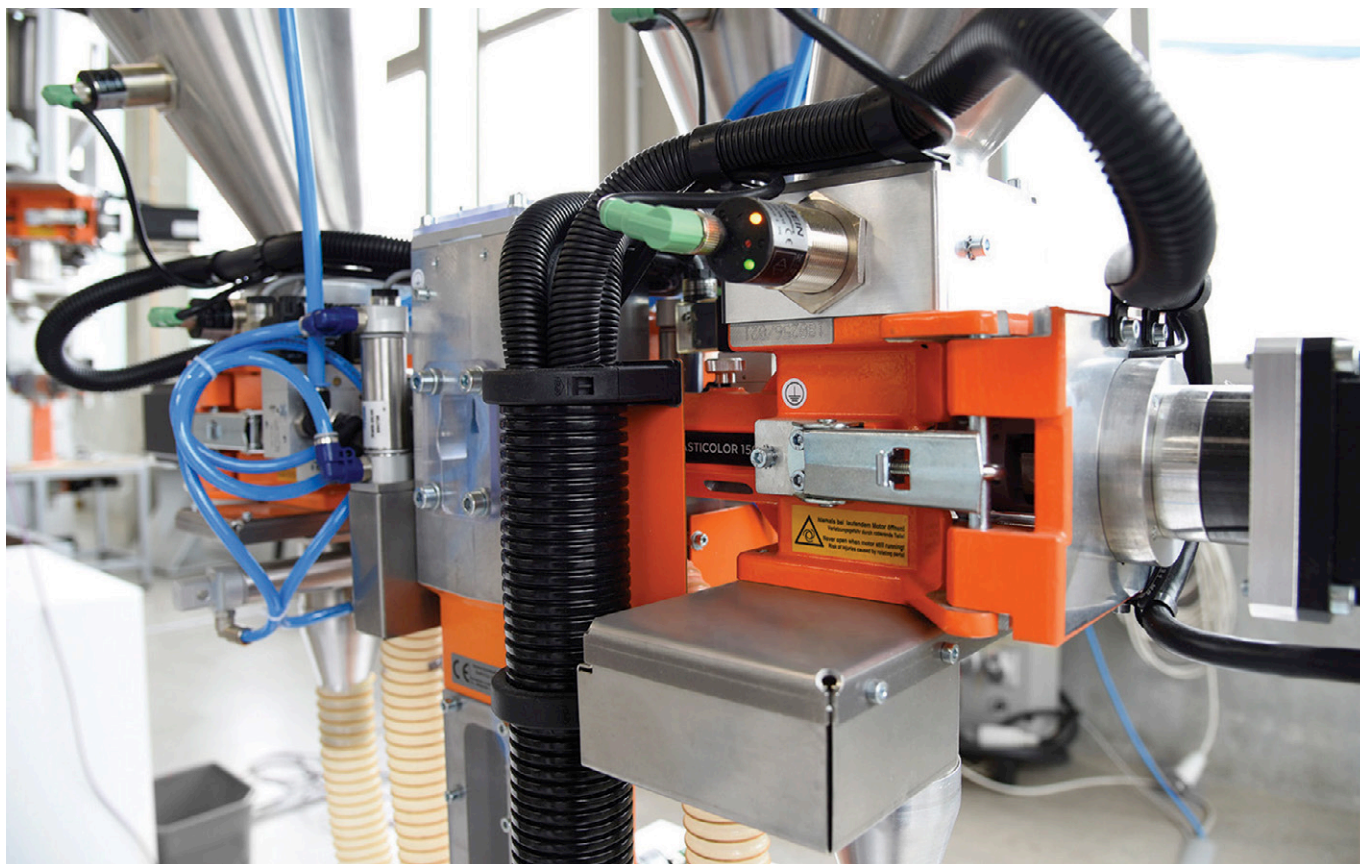


IMAGE: WOYWOOD

Moving forward: materials handling

Recent developments in materials handling equipment include a dosing unit with automated cleaning, a range of entry-level products and an app that can control multiple dryers

Before polymer can be processed, it needs to be prepared and conveyed towards the extruder – and that's where materials handling equipment comes in. As Covid restrictions begin to ease – and trade shows are confident of going ahead – a number of suppliers are ready to show off their wares in this area.

One is **Koch-Technik**, which at this year's Fakuma show in Germany will showcase a range of its mixing, dosing, conveying and drying equipment.

Its Eko-N dry air dryer will be seen at Fakuma for the first time. Since its original launch, in 2019, has been further developed with respect to energy efficiency. Together with the patented Koch-Oko energy system control, the new dryers can save up to 50% energy, says the company.

Another highlight is its KKT range of mobile

granulate dryers, which will be presented with a new touch control. The new colour displays are larger than before and give further advantages, including simple, intuitive operation of the control unit and integrated central conveying system.

It will also show the MCGT control unit for its Graviko gravimetric mixers. Thanks to the OPC-UA communication interface, the Gravikos can easily be integrated into a client's production processes. The control unit calculates process parameters automatically to allow continuous, consistent dosing.

Cleaner dosers

Woywod of Germany has expanded the functionality of its Plasticolor 1500 dosing unit by adding an automatic cleaning device.

Main image:
Woywod has added an automatic cleaning device to its Plasticolor 1500 dosing unit

Right: Motan-Colortronic's Minicolor Swift V offers good mixing quality and precise dosing

On command, the dosing unit is emptied via pneumatic slides and the use of compressed air. All components of the dosing unit are then cleaned using a control algorithm. After that, the dosing unit only has to be refilled.

The main advantage is that automatic discharging and cleaning of the dosing unit saves valuable time that would be required during a complex material change.

Using quick couplings for compressed air also allows fast and safe disconnection from the dosing unit. A double release ensures safety from sudden drops in pressure due to open hose ends. The latest generation of Plasticolor machines are configured for single volumetric dosing devices. The controller is available for different motors, and various operation modes can be set - based on requirements.

The conveyor is maintenance-free - except for the filter - and is particularly economic at smaller outputs (which is a maximum of 130 kg/h).

Swift work

Motan-Colortronic has introduced its Swift product brand, comprising entry-level models of its product portfolio for use in processes including extrusion. They include mixing, dosing, drying and conveying products.

Its Minicolor Swift V offers good mixing quality and precise dosing. It can add up to two additives to the free-flowing material stream of a main component. For free-flowing main components, there is a choice of two sizes of material hopper. Control parameters can be displayed and monitored via a 7in colour touch display. Dosing speed is calculated automatically, in relation to the calibrated weight and recipe.

A key feature of the dosing unit is the simultaneous discharge of all material components, with the mass flow matching the recipe at all times. This means that synchronously operating dosing systems do not usually require an active mixer. Dosing is synchronised with the screw speed of the extruder.

The company's Compact Swift dryers, with integrated conveying, are multi-functional and flexible. They are available in two versions, each with a drying bin in sizes of 80 or 150 litres and equipped with up to two hopper loaders - each with a capacity of 4 litres. The Compact Swift A dryer includes features such as dew point control and dry air conveying function with purging. Dew point indication



IMAGE: MOTAN-COLORTRONIC

and control are offered as standard. Constant, stable conditions are achieved by insulating the complete hopper. Integrated conveying saves space and money, as no separate system is required.

The Metrovac Swift conveying station allows small conveying systems to be operated cost-efficiently. With a wide range of blower sizes, it can be used for a variety of central conveying applications. The station is supplied with a blower filter, with the option of a cyclone dust filter with collection bin. Side channel blowers are an energy-efficient solution for short to medium conveying distances. The compact conveying station can be placed close to the processing machine to save space.

Finally, the Luxor Swift 250 dry air dryer has a capacity of 250 m³/h. It can be operated with a single drying hopper or combined with several pre-configured drying hoppers. Drying bins are available in sizes of 100-900 litres. This maintains flexibility and ensures uninterrupted production flow. To raise energy efficiency, functions such as dew point control or return air cooling can be added.

Remote installation

Movacolor has developed an updated version of its software for dosing plastic additives.

The new software includes extra features such as sensor neck integration, fast calibration options and a single shot test button for taking verification samples. It is also possible to contact support staff from Movacolor directly, via remote control.

"We would normally travel a lot to customers to help with installation or to provide support - but this is not an option during the Covid-19 pandemic," said Gerhard Dersjant, managing director of Movacolor. "We have made it our mission to serve our partners as best we can remotely. This new software allows us to help by temporarily taking over control of a machine that is thousands of kilometres away."

The software is available in 20 languages and is free of charge.

Below: Motan-Colortronic's Metrovac Swift conveying station allows small conveying systems to be operated cost-efficiently

IMAGE: MOTAN-COLORTRONIC



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Right:
Maguire's
bridge breaker
retrofits to
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Accurate dosing

Maguire Products has improved the dosing accuracy of high-capacity gravimetric blenders with a pneumatic device that fits within one of the hoppers.

The device, which Maguire calls a 'bridge breaker', is now available on its three largest blender series (the 1200, 2400, and 3000). These have maximum throughput capacities of 5,000 kg/hr, (11,000 lbs/hr) and can blend up to 12 ingredients. The bridge breaker has two elements: a hopper insert that directs material straight down onto the dispensing valve; and a rotary device that operates automatically while the dispense valve is open. The device pulses rapidly between clockwise and anti-clockwise movement, to enhance material flow through the dispense valve.

The device helps to improve dosing accuracy of regrind, recycled plastics and other ingredients that tend to obstruct flow through the dispense valve of the hopper. The hopper insert - a vertical alternative to the sloping wall of the hopper - can be retrofitted to any blender currently in operation, says the company.

"The bridge breaker addresses the growing demand for recycled content in plastic products and the increasing use of regrind as a means of reducing production costs," said Frank Kavanagh, vice president of sales and marketing. "We developed it to help one of our customers solve a problem with trim scrap."

A microprocessor makes corrections from batch to batch, including adjustments to compensate for variations in extrusion rate or bulk density, maintaining overall batch accuracy to +/- 0.1%.

In addition, Maguire has integrated FlexBus Lite

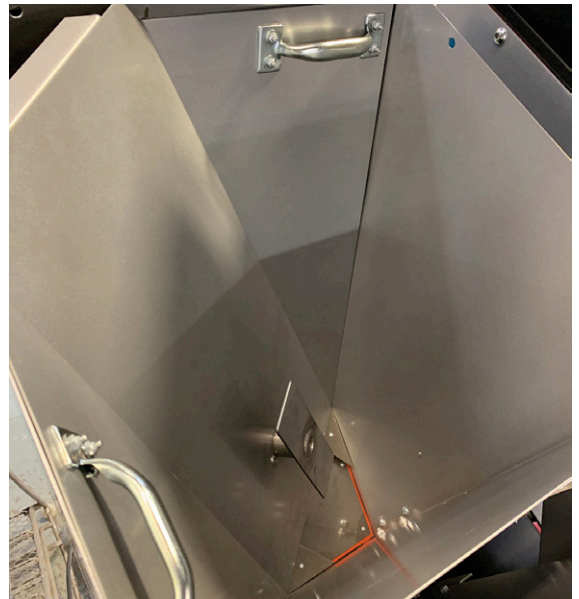


IMAGE: MAGUIRE

- a standard feature of all its touchscreen blender controls - into its Ultra dryer's touchscreen. This now allows users complete pump and receiver control in a cell, in a user friendly and straightforward control system.

FlexBus Lite allows control of one vacuum pump and full system functionality control of up to 10 materials receivers. The icon-based touchscreen shows each receiver's activity in real time - whether it is calling for material, receiving material, or showing material discharging. The operator can easily adjust pump and receiver settings in real time.

"With the dryer, vacuum chamber and material retention hopper on load cells, you are able to regulate the drying rate to the process rate," said Kavanagh. "This allows the operator to program a shutdown to any specific day and time."



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Since 1991, Sun Ace Australia has been a leading Australian manufacturer of PVC Stabilisers, Metallic Soaps and Polyolefin One Pack Additives, with two production facilities in Melbourne.

In celebration of this important milestone, we're looking back to where it all began, as well as providing a closer look at the events that have shaped SUN ACE over the past eight decades.

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Fast-forward to the present, and the SUN ACE group has continued to establish itself around the globe, with facilities and offices across Asia Pacific, Africa, Middle East, and South America.

The present and future

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Through continued growth and success, the aim of SUN ACE is simple: to remain a world-leading supplier of speciality additives and services by focusing on multi-regional market needs.



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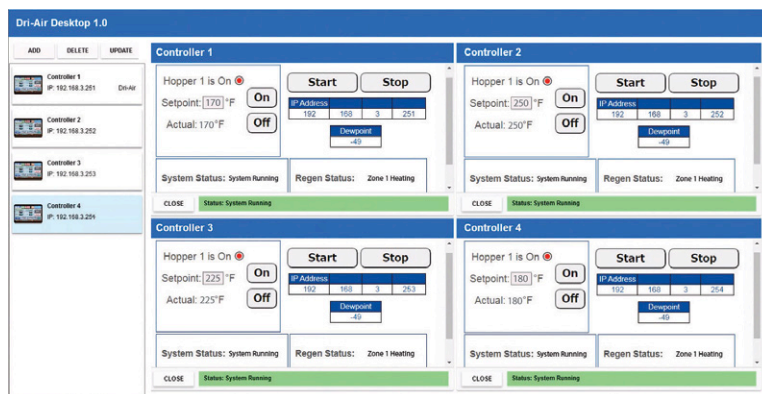
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IMAGE: DRI-AIR



Above: Dri-Air has developed a desktop app called Smart-View that can control a large number of dryers

Desktop control

Dri-Air has developed a desktop app that can control a large number of dryers.

SmartView is a web-based application that can control multiple dryers using their unique IP addresses. This allows control from a single screen without the need to visit the plant floor.

The app, available with SmartTouch controlled dryers, allows all dryers to be controlled from a central location. It shows dryer status, dewpoint, hopper status, regeneration status and the dryer's IP address. From this screen, operators can start and stop dryers, set hopper temperatures and even customise the names of individual dryers.

Dri-Air previously introduced the SmartTouch controls in 2020. The SmartTouch controller features a 7in colour touchscreen with easy-to-use prompts for temperature, time and dewpoint display. It is standard on HP series dryers and dual hopper dryers, and optional on the two-bed, Arid-X dryers.

SmartTouch features include: -49F dewpoint monitor; seven-day timer for automatic start and stop; diagnostic functions, with trending for temperatures and dewpoint; and OPC-UA open platform, for maximum connectivity.

Simpler distribution

Conair says that its new wireless RFID line-proofing technology simplifies the process of resin distribution within plastics production.

It does this by translating source/destination connections from the conveying control and HMI into operator instructions guided by colour-changing LEDs on the resin selection tabletop. Other features of the system include an LED-guided line purging option and full compatibility with Conair's Wave Conveying technology.

The RFID line proofing system works with Conair's SmartFLX conveying control and an RFID-capable Resin Selection System (RSS) table. Each material port on the modified RSS table connects to a specific resin supply. All resin sources, along with their RSS ports and unique RFID antenna

addresses, are tracked in the material source/destination database in the SmartFLX control.

Above the RSS table, the flex tubes to destination receivers have steel connection handles that contain and protect uniquely coded RFID chips, whose addresses are associated with destination receivers and stored in the SmartFLX database. Wireless signals between the flex-tube RFID chip and the antenna at each RSS port are used by the SmartFLX control to proof each connection.

When an operator initiates a material change using the RSS table, the SmartFLX control consults a database to identify one or more RSS ports linked to the correct resin source, and one or more flex tubes linked to the desired destination. As correct connections are displayed on the HMI screen, the control translates them into light-guided instructions using LEDs in the surface of the RSS table.

A correct flex tube (destination) is indicated by a flashing yellow LED, indicating that it should be unplugged from its current position and moved to a new RSS port (source) - identified by a flashing blue LED. To make the connection, the operator moves the flex tube end to the indicated RSS port, then connects the tube into the port. This aligns the tube's RFID-equipped handle with the tabletop slot next to the port. Inserting the tube handle into this slot aligns its RFID chip with the port's RFID antenna, enabling the SmartFLX control to proof the connection.

CLICK ON THE LINKS FOR MORE INFORMATION:

➤ www.koch-technik.com

➤ www.woywod.de/en

➤ www.motan-colortronic.com

➤ www.movacolor.com

➤ www.maguire.com

➤ www.dri-air.com

➤ www.conairgroup.com

Right: Conair says its wireless RFID line-proofing technology simplifies the process of resin distribution



IMAGE: CONAIR



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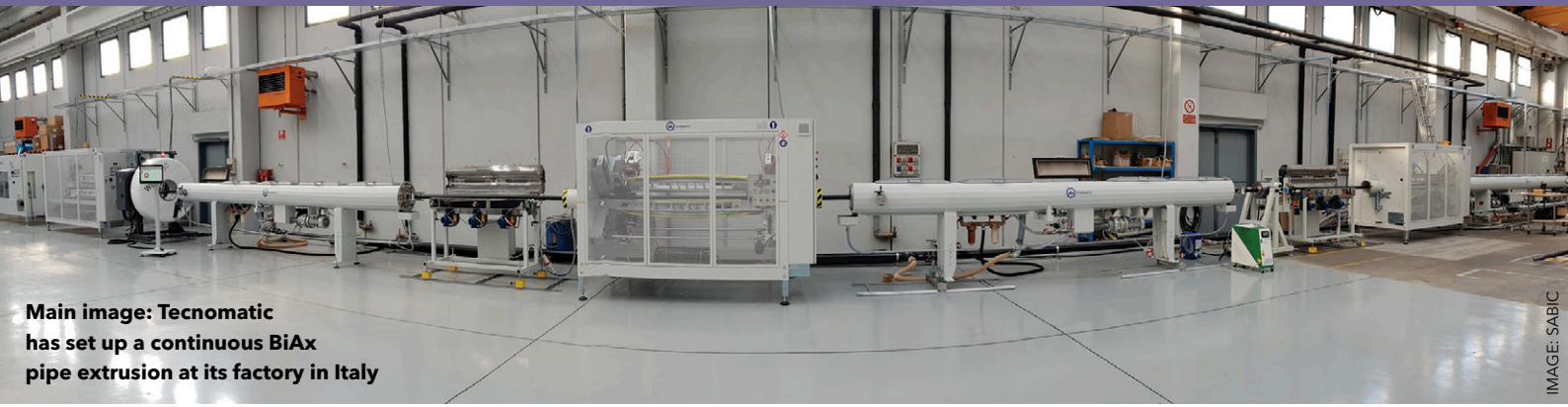


IMAGE: SABIC

Main image: Tecnomatic has set up a continuous BiAx pipe extrusion at its factory in Italy

At a stretch: advances in oriented pipe technology

Industry partners are attempting to commercialise 'oriented polyolefin pipe', while efforts continue to expand industrial opportunities for PVC-O pipe

Oriented pipe is most commonly made from PVC – in the form of PVC-O pipe. However, there are plans to introduce another type of oriented pipe to the market.

Materials supplier **SABIC**, machinery manufacturer **Tecnomatic** and pipe maker **Aquatherm** are involved in a project to commercialise 'oriented polyolefin pipe' – or 'BiAx' pipe. The process involves extruding a relatively small, thick-walled pipe from PE or PP – then drawing it over a heated mandrel. This converts it into a larger diameter pipe with thinner walls. The partners say that the biaxial stretching gives it a higher burst strength than conventional pressure pipe – which could allow a 30% saving in material use.

SABIC, which heads the project, says BiAx pipe will offer "substantial improvements over incumbent polyolefin pipes across the entire range of performance criteria". These include: higher resistance against internal pressure; better resistance to slow-crack growth – allowing trenchless pipe installation; a smooth inner wall – which reduces the energy needed for pumping; and higher abrasion resistance.

In addition, the pipes – made from 'optimised formulations' of PE and PP – also promise better resistance to disinfectants, a lower coefficient of linear thermal expansion (CLTE) and better low-temperature impact strength.

Tecnomatic has set up a continuous BiAx pipe extrusion line for evaluation, trials and process optimisation, using SABIC resins. The pipes are

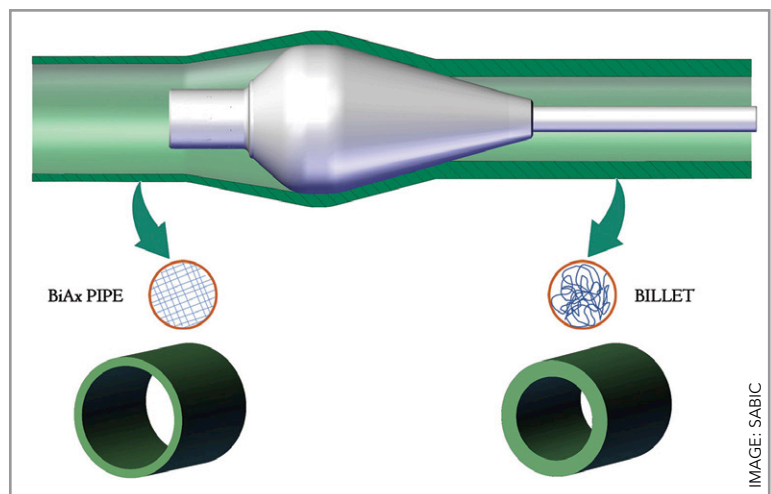


IMAGE: SABIC

extruded conventionally, then drawn over the heated mandrel – and stretched in two directions to improve their mechanical properties.

It is a standard extrusion line, but with extra "dedicated machinery" to stretch the pipe biaxially, says Tecnomatic.

"Compared to a traditional line, the most important modification is the BiAx device – and our process know-how," said Massimiliano Vailati, sales director at Tecnomatic. "The heated mandrel is a crucial part. It stretches the pipe in two directions, and at the right temperature."

He says that Bi-Ax pipe will not be in direct competition with other types of pipe – such as PVC-O – but will be appropriate for end uses such as potable water and sanitation.

"Applications can be the same as for standard

Above:
A heated
mandrel
converts a
plastic 'billet'
into BiAx pipe

IMAGE: BATTENFELD-CINCINNATI



Above:
Molecor uses seven Battenfeld-Cincinnati lines to make PVC-O pipe at its Madrid facility

pipe – but the improved resistance to pressure and slow crack growth makes it perfect for trenchless installation,” he said.

SABIC has filed two recent patents in this area, which explain some of the details behind the technique. One focuses on the use of PE, while the other deals with PP.

SABIC has described the BiAx project as “a new concept”. It says collaboration will “accelerate time to market” – but has not specified when this might happen.

Calculation software

One well-established form of oriented pipe is PVC-O pipe. **Molecor** of Spain has made its TOM mechanical calculation software – for PVC-O pipe – available to the market.

The tool, based on the UNE 53331: 2020 Standard has been validated by Marcos Rodríguez Millán of the Universidad Carlos III de Madrid. He verified that calculations made using the software complies with those derived from the application of the UNE 53331: 2020 standard.

The tool has simple functionality and is easy to use, says Molecor. It determines the validity of the installation based on the demands that the pipe will withstand, as well as its safety coefficients against breakage and crushing.

Molecor is also extending its range of fittings made from PVC-O. The EcoFittom fittings can be used to make an all-PVC-O system but can also be used with pipes made from other materials including standard PVC.

Fittings are available in a number of formats, including elbows – 11.25°, 22.5°, 45° and 90° – plus reducers, couplers and sliding couplers. The company began by adding these for DN225 diameter pipe, with those for DN125 and DN140 being added over the course of this year.

Expanded agreement

In addition, the company has continued to expand its partnership with machinery manufacturer **Battenfeld-Cincinnati** of Austria. One part of this is jointly selling extrusion lines to make PVC-O pipe. Here, it has sold around 15 lines, for customers in countries including India, Malaysia and Australia.

Molecor also produces PVC-O pipe itself. To do this, it uses seven Battenfeld-Cincinnati at its main production plant in Madrid, making pipe with external diameters of DN90 to DN1,200mm. These lines are equipped with parallel twin-screw extruders from the TwinEx series, PVC-O spider pipe dies with internal cooling and downstream components such as vacuum bath, haul-off and cutting saw.

Molecor manufactures parts of the line for the second process step, which include a heating station, blowing station and cooling unit.

“We make use of our own experience in pipe production for continuous optimisation of our machine technology,” said Dolores Herran, business development director at Molecor.

CLICK ON THE LINKS FOR MORE INFORMATION:

- > www.sabic.com
- > www.tecnomaticsrl.net
- > www.aquatherm.de
- > www.molecor.com
- > www.battenfeld-cincinnati.com



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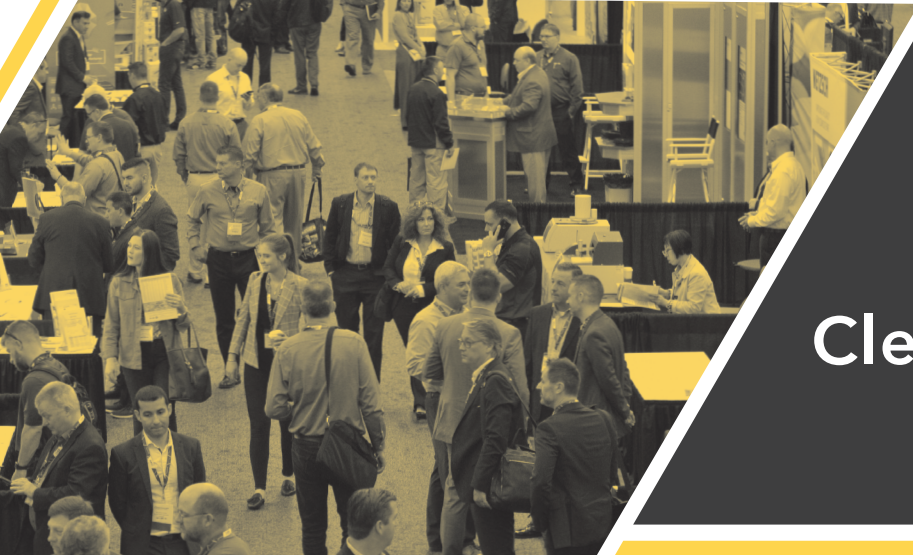
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CMG Granulators



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Plastics Extrusion World Expo heads to America

We look ahead to the Plastics Extrusion World Expo which is taking place in Cleveland, Ohio early next month

The Plastics Extrusion World Expo returns to the Huntington Center in downtown Cleveland, Ohio, USA on 3-4 November 2021.

Organised by AMI, the free-to-attend exhibition and its focused conference are running alongside the Compounding World Expo, Plastics Recycling World Expo and Polymer Testing World Expo. In total, there will be more than 200 exhibitors and 100 speakers across the four expos and five conference theatres. The previous event in 2019 attracted 4,375 visitors.

After 18 months without major industry gatherings, the exhibition will provide a valuable opportunity to reconnect with suppliers and customers, as well catch up on what's been happening and discuss what lies ahead. To register for your free ticket, click [here](#).

"We are all really looking forward to returning to Cleveland with these focused expos after having to postpone them last year," said Andy Beevers, events and magazines director at AMI. "The support we have had from our exhibitors throughout the pandemic has been fantastic and we're delighted with the huge range of leading suppliers that will be available for visitors to meet at the show".

Over the following pages we preview the free

conference programme and look at a selection of just some of the companies you'll be able to see in Cleveland. Click [here](#) to view the full list of all 200+ exhibitors.

Register for free

It is free to attend the Plastics Extrusion World Expo and its conference theatre. You will also have access to the plastics compounding, recycling and testing exhibitions and their conference sessions, which are running at Cleveland's Huntington Center on the same dates. To register for your free ticket click [here](#).

Main image:
The last North American event in 2019 welcomed a large number of visitors

PLASTICS EXTRUSION WORLD EXPO

Dates: November 3-4
Entry is free

Venue:
Huntington Center,
Cleveland,
Ohio, USA

Online registration:
[CLICK HERE](#)



Adescor supplies downstream equipment for the corrugated pipe and extruded pipe industry. Its equipment includes pipe haul-offs, cut-offs, perforators, filter loaders, spin welders, inner liner trimmers, and coilers. Adescor also designs and manufactures custom industrial machines for sheet winding, material handling, and packaging for the plastics industry.

➤ www.adescor.com

US-based **Advanced Blending Solutions (ABS)** designs and supplies material handling, blending, and controls for the plastics industry. With representatives throughout the USA and the world, ABS is a fast-growing company committed to providing

the best products and services to meet the unique needs of its customers.

➤ www.adv-blend.com

AMI is a leading provider of market intelligence, databases, magazines and events for the global plastics processing industry. Its consultants, researchers, writers and event organisers understand the global plastics processing industry - including how markets have changed, and where they are heading.

It helps identify market opportunities, new customers and innovative technologies to help business growth.

➤ www.ami.international



Catch up at the conference

There will be a free-to-attend focused conference theatre at the Plastics Extrusion World Expo in Cleveland on 3-4 November 2021.

The busy two-day programme has been put together by AMI, which has extensive experience of organising conferences on all types of extrusion, including pipe, profile and tubing production.

One highlight will be a debate on the future for plastics pipes and profiles with panellists including: Arturo Valencia, global director of R&D at **Dura-Line**; Brian King, executive VP of product management and marketing at **Advanced Drainage Systems**; and Moulee Palaniappan, R&D materials engineer at **Azek**.

Technical presentations will include a look at screw design for PVC profile production by Haikun Xu, process engineer with **KraussMaffei Extrusion**. Advances in downstream equipment for the production of plastic pipe will be the subject of a talk by Gerry Lamont, service director



Conference sessions are a key part of AMI's events

at **Custom Downstream Systems**. In addition, Justin Marriott, product manager for Key Filters at **Parkinson Technologies** will provide a comparison of screen changer designs for tight-tolerance extrudates.

Sticking with the technical talks, Andy Cauffman, president of **Promix Solutions** will cover the configuration of extrusion lines for physical foaming with N_2 and CO_2 , while the online measurement of rheological properties will be addressed in a talk by **Dynisco**. Dan Barlow, president of **Integrated**

Control Technologies, will discuss the upgrading of older extrusion lines, and John B. Amendola III, president and head engineer at **Artec Machine Systems** will be focusing on gearbox specification and maintenance.

There will also be presentations of interest for extruders in the four other conference theatres focused on plastics compounding, recycling and testing. Download the conference brochure featuring the full conference programmes for all five theatres [here](#). And register for your free ticket [here](#).



Speakers at the event include (from left) Brian King, Haikun Xu, Arturo Valencia, Gerry Lamonte, Andy Cauffman, John Amendola III and Dan Barlow



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Conference Organiser

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Right: Davis-Standard's MEDD extruder is designed for medical tubing applications

Arlington Machinery specialises in the purchase and sale of used machinery. From extruders to complete extrusion lines, it sells the equipment that customers need, including recycling, compounding, sheet, pipe and profile lines. On an individual machine basis, it has a warehouse full of ancillary equipment such as granulators, shredders, dryers and screen changers all available to be test run and shipped immediately.

➤ www.arlingtonmachinery.com

Berlyn ECM designs, engineers, and manufactures plastic processing equipment for extruders of film, sheet, pipe, profile and tubing. Its products include extruders, low bulk density feeders, screen changers, continuous filters, dies, water baths, air strippers, diverter valves and screws and barrels. rebuild/refurbish services.

➤ www.berlynecm.com

Brabender makes testing equipment for measuring rheology, viscosity, processing development, laboratory scale compounding, extrusion, mixing applications and moisture. Its range extends from laboratory equipment through to small-scale production. The product portfolio provides applications of many industrial segments in food, chemicals and pharmaceuticals. Its instruments are used in quality control as well as R&D.

➤ www.cwbrabender.com

Busch is a leading manufacturer of vacuum pumps, blowers and compressors.

Busch USA has a 200,000 sq ft HQ facility in Virginia Beach,

Virginia, with a vacuum pump manufacturing and system building facility. The HQ also houses one of seven service centres, located across the country and in Puerto Rico, providing both industrial and medium/high vacuum pump repair and remanufacturing.

➤ www.buschvacuum.com

Combilift is a leading manufacturer of multi-directional forklifts and long load-handling solutions. More than 60,000 units have been sold in over 85 countries since Combilift was established in 1998. The company

says innovation, flexibility and service is the ethos on which its success is built. It exports to more than 85 countries and has more than 60,000 trucks in use worldwide.

➤ www.combilift.com

Custom Downstream Systems is a leader in custom downstream plastic extrusion machines, delivering turnkey systems for polymer and rubber applications including pipes, profiles, tubes and medical devices. From the start, it has focused on setting new standards for durable, reliable machines - meeting exact customer specifications that is backed by efficient service.

➤ <http://cdsmachines.com>

Davis-Standard is a leader in extrusion and converting technology. Its systems support manufacturing applications and customers in industries including agriculture, automotive, construction, medical, energy and food and beverage packaging. It has manufacturing and technical facilities in countries including the USA, Canada, China, Germany and the UK. Its product lines include blown and cast film, pipe, profile and tubing, sheet extrusion and thermoforming.

➤ www.davis-standard.com

Dynisco says it provides a "window into the process" with its products and solutions for indication and control of critical plastic process measurements - including, pressure, temperature and polymer rheology. Harnessing these parameters allows a plastic processor to reduce lot-to-lot variations, reduce scrap, improve productivity, and integrate recycled materials into their process without sacrificing quality.

➤ www.dynisco.com



IMAGE: DAVIS-STANDARD

Right: Brabender offers a variety of equipment for testing, processing and production of plastics



IMAGE: BRABENDER



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Dr. Rudolf Pfaendner

Division Director Plastics
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Thomas Schmutz

Director Technical
Service & Application
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SONGWON



Dr. Anna Gergely

Director
EHS Regulatory
STEPTOE & JOHNSON

IMAGE: BALZANELLI



Above: FB Balzanelli produces a range of automatic and semi-automatic pipe coilers

FB Balzanelli produces automatic and semi-automatic coilers. These include automatic solutions for packaging pipes, as well as automatic palletising systems (which can serve more than one line). These are developed according to its commitment to technology, innovation, quality and customer care. Constant innovation offers a technical solution to each pipe coiling, packaging and palletising need. A focus on customer care helps to ensure correct, reliable operation of all systems.

➤ www.fb-balzanelli.net

As well as offering technologies, systems and components for plastics processing, **Gneuss** supplies turnkey solutions for sheet, fibres and pellets. Based in Bad Oeynhausen, Germany, it serves customers worldwide. It has a subsidiary in the USA, offices in Brazil and China, and a cooperation partner in Japan.

➤ www.gneuss.com

Integrated Control Technologies (ICT) specialises in extruder drive and control upgrades. It provides upgrades with intuitive graphical designs, self-diagnostics, remote connectivity and data acquisition. Because of the problems associated with locating and hiring individuals with the proper skillsets – who can operate and maintain control systems – ICT says the answer is to use modern systems.

➤ www.integratedcontroltech.com

Right: Pixargus develops systems such as its AllRoundDia for surface inspection and dimension measurement

Labtech Engineering is a Thai laboratory equipment manufacturer for polymer processing. It offers a range of single and twin-screw extruders, two-roll mills, mixers, hydraulic presses from 20 to 80 tonnes, filter testers, single and multi-layer film blowing lines and



IMAGE: PIXARGUS

film casting lines, 3D filament and tube producing lines. Representing Labtech, **Milabtech** is based in Fenton, Michigan.

➤ <https://milabtech.us>

NDC Technologies supplies process measurement and control instrumentation for use in extrusion. It provides weight, thickness, coat weight and moisture measurement and control for applications in film, extrusion and converting. NDC also serves the pipe and tube industries, with dimensional monitoring of parameters including diameter, ovality, wall thickness, eccentricity, length and speed.

➤ www.ndc.com

NFM designs and manufactures single- and twin-screw extruders and extrusion systems. Each system is custom engineered to meet specific requirements, and can include a variety of special items. Its co-rotating, twin-screw extruder technology offers customisable design with a large range of sizes – from 26mm lab extruders to 240mm production lines.

➤ www.nfm.net

Omipa is a specialised manufacturer that designs and builds complete extrusion and co-extrusion lines for sheet, foil, film and hollow profile in different thermoplastic materials. Its policy is based on in-house production of all the different components of the extrusion line. This starts from the design – oriented to the customer's needs and requirements – through to installation of the finished line.

➤ www.omipa-extrusion.com

Parkinson Technologies is a leading designer and manufacturer of large-scale web handling, winding and plastics processing equipment for the continuous web processing industry. The company includes Key Filters screen changers, Marshall & Williams Plastics orientation lines, Parkinson

Winders surface and centre winders, and Dusenbery Converting Systems slitter rewinders.

➤ www.parkinsontechnologies.com

Pixargus offers turnkey inline systems for surface inspection and dimension measurement.

Its measuring and testing systems detect defects and material deviations on extruded rubber profiles, cables, tubes and pipes, as

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Looking beyond PEWE

As well as companies within the PEWE show, there are many others in neighbouring exhibitions. Here is a selection of those relevant to pipe and profile extruders.

Collin Lab & Pilot Solutions

Pilot and laboratory lines for plastic processing companies and research institutes.

➤ www.collin-solutions.com

Cumberland

Size reduction equipment for a wide range of applications.

➤ www.cumberlandplastics.com

Krauss Maffei

Machinery and systems, especially for pipe extrusion.

➤ www.kraussmaffei.com

Netzsch Instruments North America

Thermal analysis instrumentation for material characterisation.

➤ www.netzsch.com

Nordson

Broad portfolio including filtration systems, pumps, valves and extrusion dies.

➤ www.nordson.com

Pallmann

Size reduction machines, including models customised for specific requirements.

➤ www.pallmannindustries.com

Piovan

Auxiliary automation systems for storage, conveying and processing plastics and polymers.

➤ www.piovan.com

Q-Lab Corporation

Weathering and corrosion test chambers, including the QUV accelerated weathering tester

➤ www.q-lab.com

Schwing Technologies

Thermal cleaning to remove polymers and contaminations from tools and machine parts.

➤ www.schwing-technologies.com

Sikora

Measuring and inspection systems for pipe and profile extrusion.

➤ www.sikora.net

Struktol

Lubricants and process additives for all major polymers.

➤ www.struktol.com

Vecoplan

Equipment for shredding, conveying and processing primary and secondary raw materials.

➤ <https://vecoplan.com>

well as plastic foils. It also checks raw materials in an automated inspection process. Its systems are used in the automotive, medical, building and infrastructure and consumer goods sectors.

➤ www.pixargus.com

Plastics News covers the business of the global plastics industry. It is published weekly and includes an end-of-year Market Data Book with information on thousands of North American plastics processors. Plastics News and its sister brands in the Crain Global Polymer Group also produce conferences, trade shows, webinars and live events.

➤ www.plasticsnews.com

Promix Solutions specialises in mixing, foaming and cooling in plastics processing and polymer production. The company makes physical foam extrusion systems, gas dosing and injection systems, melt coolers, cooling mixers, in-line viscosity measurement systems, nucleating agents for foaming and static mixers for extrusion and injection moulding.

➤ www.promix-solutions.ch

PSI-Polymer Systems is a leading supplier of high-performance gear pumps, screen changers, die changers, diverters, custom auxiliaries and rebuilds for the polymer, adhesive, chemical, and food processing industries. Its quick-response, consultative approach is structured to help processors find efficient, cost-effective solutions to extrusion process problems.

➤ www.psi-polymersystems.com

Shini USA offers a range of granulating, drying, conveying, feeding, blending, heating and cooling systems, as well as automation products. Its machinery is used in processes including compound mixing, extrusion, thermoforming and blown film. It says it is committed to making sure that every unit operates exactly as promised and performs without any difficulties.

➤ www.shiniusa.com

Sterling is a supplier of temperature control units for plastics and industrial applications. Its systems use water or oil as the heat transfer medium for applications in industries including plastics. From its roots in temperature control, it has expanded to offers a range of plastics ancillary equipment, such as chillers, and process control and materials handling equipment.

➤ www.sterlco.com



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Speakers include:



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IMAGE: APPLIED MARKET INFORMATION

Polymer Testing World Expo makes US debut

The Polymer Testing World Expo makes its North American debut in Cleveland, Ohio, in November. We have selected some of the highlights at this free-to-attend conference and exhibition

The North American edition of the Polymer Testing World Expo is being held at the Huntington Convention Center in Cleveland, Ohio, on 3-4 November 2021. The free-to-attend conference and exhibition is a new forum for scientists and researchers who develop, test and analyse polymer materials, formulations and finished products. The event first took place in Germany in September this year and is making its American debut next month.

Organised by AMI, publisher of *Pipe and Profile Extrusion* magazine, it is running alongside the Compounding World Expo, Plastics Recycling World Expo and Plastics Extrusion World Expo. In total, there are more than 200 exhibitors and over 100 speakers to choose from across the four exhibitions and their five focused conference theatres.

"When we ran the Compounding World, Plastics Recycling World and Plastics Extrusion World Expos in Cleveland in 2019, we had 4,375 visitors, and 1,091 of these were involved in R&D and materials testing," says Andy Beevers, AMI's events director. "We therefore decided to add an area within the event focused specifically on polymer testing and analysis, where visitors can explore new lab technologies and stay up to date with best practices and the latest standards."

Conference programme

The dedicated conference programme for the Polymer Testing World Expo features two days of expert presentations covering a range of hot testing topics and providing practical advice and tips. ➤

Main image:
The conference streams at the first North American Polymer Testing World Expo cover testing theory and practice and are likely to be well attended

POLYMER TESTING WORLD EXPO



Speakers at the Polymer Testing World Expo in Cleveland, Ohio, US, include (clockwise from top left) PerkinElmer Principal Product Line Leader Dr Aniket, Netzsch Technical Sales Support Specialist Yanxi Zhang, CEM Lead R&D Scientist Alicia Stell, Case Western Reserve University Professor of Macromolecular Science and Engineering Joao Maia, Intertek Allentown Business Development Director Paula McDaniell, and Sikora Business Development Engineer Alex Nguyen

New developments in polymer analysis are being covered in presentations from leading suppliers of laboratory equipment. Dr Aniket, Principal Product Line Leader at **PerkinElmer** will focus on evolved gas analysis from polymeric materials using hyphenated instrumentation technology. Innovations in measurement and data analysis of DSC and TGA instruments will be covered in a talk by Yanxi Zhang, Technical Sales Support at **Netzsch**.

Completing the analysis sessions, Alicia Stell, Lead R&D Scientist in the molecular sample preparation division of **CEM**, will provide a practical look at ways to find faster and more effective methods for analysing polymers and compounds.

There are also some interesting talks lined up on the polymer testing front. Joao Maia, Professor of Macromolecular Science and Engineering at **Case Western Reserve University** will speak about online rheological and chemical testing of polymers during extrusion and compounding. Meanwhile, the hot subject of advanced testing solutions

for recycled plastics will be addressed by Paula McDaniell, Business Development Director at **Intertek Allentown**.

McDaniell will also present a talk during the expo covering impurity identification strategies. This is one of three separate presentations looking at the critically important subject of quality control. Alex Nguyen, Business Development Engineer at **Sikora**, will look at automated lab inspection and analysis of plastics pellets, while Gilad Roter, VP for Business Development at **Inspect Technologies**, will discuss the implementation of an innovative solution for the inline inspection and sorting of pellets.

Jason Poulton, Senior Technical Advisor at the **Akron Rubber Development Laboratory**, will give a presentation on failure analysis of polymers. Other presentations on the long-term performance of plastics will focus on weatherability. Bill Tobin, Senior Technical Marketing Specialist at **Q-Lab** will cover UVC testing of materials, while Doug Vermillion, Director of **Eye Applied Optix**, will introduce the super UV metal halide chamber, which he says can lead to "game-changing reductions in weathering test times".

To download the full conference programme for the Polymer Testing World Expo, plus details of all of the speakers across the four additional conference theatres focused on plastics compounding, recycling and extrusion, click [HERE](#).

Exhibitor line-up

Exhibitors at the Cleveland expos include suppliers of a wide range of materials testing and analysis products. Examples include CEM, CW Brabender Instruments, Dynisco, Eye Applied Optix, Inspect Technologies, Konica Minolta, Netzsch, PerkinElmer, Q-Lab, Sikora and ThermoFisher Scientific.

In addition, a number of leading research and testing organisations have booked booths in the exhibition areas and will be available to discuss their capabilities and projects. They include Akron Rubber Development Laboratory, Intertek and the Polymers Technology Center.

Several exhibitors will be highlighting their lab-scale processing equipment, such as extruders and compounding lines. These include Collin Lab & Pilot Solutions, CW Brabender, Labtech Engineering and Xtrutech.

You can view the full list of the 200+ exhibitors at Cleveland [HERE](#).

REGISTER FOR YOUR FREE TICKET

To register for your free ticket to the Polymer Testing World Expo, which will also give you access to the three other expos and all five conference theatres, visit: www.ami.ltd/ami-plastics-expos-usa

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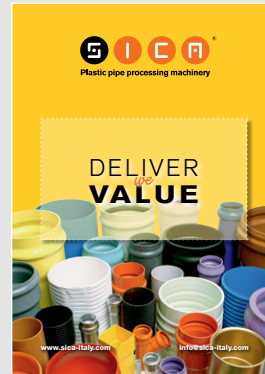
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SICA: PIPE PROCESSING



This brochure from Sica covers the company's full range of performance pipe finishing equipment including its novel TRS-W cutting and chamfering, Unibell electric bellowing and robotised packaging machines.

[CLICK HERE TO DOWNLOAD](#)

MIXACO: MIXING TECHNOLOGY



Mixaco has been driving innovation in PVC mixing technology for more than 50 years and has 7,500+ machines installed worldwide. This brochure explains some of the details that make its HM and KMH heating cooling mixers stand out.

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DAVIS-STANDARD: PIPE & PROFILE



Davis-Standard supplies a wide range of extruders and extrusion systems for pipe, profile and tubing applications, including medical tubing. This brochure details the range of equipment available and key performance benefits.

[CLICK HERE TO DOWNLOAD](#)

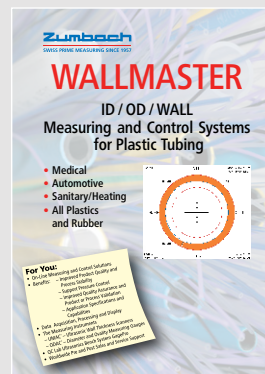
NDC: PRECISION GAUGING



The Accuscan Pro series single-axis diameter gauges are the latest addition to the NDC Technologies precision on-line measurement product line. Learn more about performance and features in this four-page brochure.

[CLICK HERE TO DOWNLOAD](#)

ZUMBACH: MEASUREMENT CONTROL



This eight-page brochure details the main features of Zumbach's Wallmaster measurement and control system for improving product quality, process stability and data capture in plastic tube and pipe extrusion applications.

[CLICK HERE TO DOWNLOAD](#)

If you would like your brochure to be included on this page, please contact Claire Bishop claire.bishop@ami.international. Tel: +44 (0)1732 682948

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Ownership:	Private
Employees:	Around 20
Profile:	IPL (Industria Plastica La Scala) was founded in the early 1970s by Dino La Scala, as a producer of plastic pipes and shutter profiles. It specialises in the production of PVC and polypropylene (PP) pipes for drainage and sewage systems, as well as for building and construction applications. It also produces HDPE corrugated sewerage and drainage pipe, as well as cable conduits, flexible hoses and gutter channels. Notable customers include the Italian railway network (Trenitalia), metro systems in Naples and Catania, and a nearby NATO base.
Product lines:	The company supplies pipe for a number of applications. Its PVC pipes and fittings for building applications – such as ventilation pipes, downpipes and domestic water pipes – are available in diameters of 32 to 500mm. It also supplies PVC sewerage and drainage pipe, for hot and waste water in civil and industrial buildings, in diameters of 110-500mm. PP pipes and fittings – branded as Superpipe – are available as push-fit sewage pipe, with a white interior and grey exterior. It is impact resistant and self-extinguishing. Its double-wall corrugated PE pipe for civil and industrial use is resistant to deformation and chemical agents.
Factory location:	The company has a single factory in the Belpasso municipality of Catania, in Sicily. The production plant covers an area of 2,000 sq m, with a warehouse space of 8,000 sq m. Here, the company runs 'seven or eight' extrusion lines from Bausano – which has been a supplier since the late 1990s.

To be considered for 'Extruder of the Month', contact the editor on lou@pipeandprofile.com

Pipe and Profile FORTHCOMING FEATURES EXTRUSION

The next issues of Pipe and Profile Extrusion magazine will have special reports on the following topics:

November/December 2021

Wood-plastic composites
Pipes in infrastructure
Extruder wear protection
PEW Expos: show reviews

January/February 2022

Engineering plastics & composites
Titanium dioxide
Screenchangers/melt filtration
Control & instrumentation

Editorial submissions should be sent to Lou Reade: lou@pipeandprofile.com

**For information on advertising in these issues, please contact:
Paul Beckley: paul.beckley@ami.international +44 (0) 117 311 1529**

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Pipe and Profile September 2021

The September 2021 edition of Pipe and Profile Extrusion magazine looks at the latest innovations in PEX pipe production and application. It also reviews developments in downstream equipment, large diameter pipe, and window profiles.

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Pipe and Profile July/August 2021

The July-August edition of Pipe and Profile Extrusion dives into PVC with a report on new recycling targets in Europe, plus the latest developments in PVC additives. Other features are on extruder investments and developments, and materials patents.

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Compounding World September 2021

The September issue of Compounding World has features on bio-based plastics, biodegradable plastics, pigments, purging agents and stabiliser additives. Plus there is a preview of the Compounding World Expo in Essen in September.

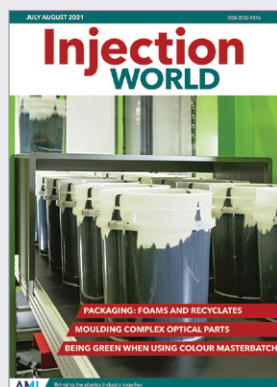
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Plastics Recycling World September 2021

The September edition of Plastics Recycling World looks at the challenge of sorting plastics. It also reviews developments in rigid packaging recycling and granulation, and previews Europe's Plastics Recycling World Expo.

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Injection World July/August 2021

The cover story in the July-August issue of Injection World looks at how foams and recyclate are increasingly being used to mould sustainable packaging. Other features are about meeting the demands of complex optical parts and the latest in colour masterbatch.

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Film and Sheet September 2021

The September 2021 edition of Film and Sheet Extrusion magazine looks at the latest innovations in packaging thermoforming. It also explores developments in multi-layer films, plasticisers, and laboratory extrusion and previews the Polymer Extrusion World Expo in Germany.

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Plastics Recycling
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GLOBAL EXHIBITION GUIDE

2021	29-30 September	Plastics Extrusion World Expo Europe, Essen, Germany	https://eu.extrusion-expo.com
	12-16 October	Fakuma, Friedrichshafen, Germany	www.fakuma-messe.de
	26-28 October	Plastic Print Pack Nigeria, Lagos, Nigeria	www.ppp-nigeria.com
	3-4 November	Plastics Extrusion World Expo North America, Cleveland, USA	https://na.extrusion-expo.com
	15-18 November	Arabplast, Dubai, UAE	www.arabplast.info
2022	25-28 January	Interplastica, Moscow, Russia	www.interplastica.de
	17-21 February	PlastIndia, New Delhi, India	www.plastindia.org
	15-17 March	Swiss Plastics Expo, Lucerne, Switzerland	www.visit.swissplastics-expo.ch/en/
	8-10 March	JEC World, Paris, France	www.jec-world.events
	8-11 March	Plastimagen, Mexico City, Mexico	www.plastimagen.com.mx
	5-8 April	FIP, Lyon, France	www.f-i-p.com
	3-6 May	GreenPlast, Milan, Italy	www.greenplast.org
	26-30 September	Colombiaplast, Bogota, Colombia	www.colombiaplast.org
	3-7 October	Plastex, Brno, Czech Republic	www.bvv.cz/en/plastex
	19-26 October	K2022, Dusseldorf, Germany	www.k-online.com
	1-3 December	Plastic Print Pack West Africa, Accra, Ghana	www.ppp-westafrica.com

AMI CONFERENCES

5-6 October 2021	Medical Tubing & Catheters, Cologne, Germany
26-27 October 2021	Oil & Gas Non-Metallics, London, UK
26-28 October 2021	Polyolefin Additives Europe, Berlin, Germany
16-18 November 2021	PVC Formulation Europe, Cologne, Germany
1-2 March 2022	PVC Formulation North America, Cleveland, USA
14-16 March 2022	Cables Europe, Cologne, Germany
19-20 July 2022	PVC Formulation Asia, Bangkok, Thailand

For information on all these events and other conferences on film, sheet, pipe and packaging applications, see www.ami.international



29 - 30 September, 2021
ESSEN, GERMANY



3 - 4 November, 2021
CLEVELAND, OHIO

www.ami.international/exhibitions