

# IMPROFIL



**MF400**

NEW MACHINE DEVELOPMENT

**EGYPT'S FIRST POWER PLANT**

BUILT WITH KRAH PIPES

**KRAH PIPES**

FOR NEW MOSCOW MOTORWAY

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**The magazine for large Plastic Pipe Technology**

No. 28 / 2022

**ISSN 2626-4366**

**Imprint**

Krah Pipes GmbH & Co.KG  
Betzdorfer Str. 8  
57520 Schutzbach

www.krah.net



@derkrah



@KrahPipes



@KrahPipes

# Dear Reader

Once again, a year with many big events is over. Covid-19 is almost forgotten - instead we now have a war in Eastern Europe.

At the World Cup in Qatar, politics took precedence over sports, but of course we congratulate our Argentinian friends on their victory.

Elon Musk buys Twitter and puts it to the vote whether he should resign, energy costs in Germany triple, official inflation reaches almost 10% - worries upon worries as it seems.

However, despite initial concerns about visitor numbers and costs, we were able to successfully complete two trade fairs (IFAT in May and K2022 in October). All in all we can say that both fairs had a smaller visitor number than "usual", but we still made many new, important contacts and were able to solidify our "old" relationships.

Despite this confusing time, our global Krah Community members were able to realise various pipe projects, and we can report on some of them here. We were also able to launch a new machine, the MF400, which makes large cuts and holes in pipes at low cost, thus reducing the cost of plastic fittings considerably (more on page 11). The state is intervening more and more in the market, through sanctions, expropriations and price caps, whether this is in the spirit of the social market economy remains to be seen. Despite all this, we were able to welcome three new community

members, and the next Krah Community Meeting will take place directly at the home of one of the three: Malaysia.



We are already now looking forward to visit them at the new factory, to see our machines producing pipes for national projects there and to get to know the people behind the company.

We wish our customers, suppliers, employees and their families a peaceful Christmas and a happy New Year - and hope that we can spend many more years together in peace.

Alexander



## Krah pipes used for new motorway near Moscow



*Installing the pipes in the trench*

**For the first time a novelty of POLYPLASTIC Group - pipes with a diameter of DN/ID3500mm - were used in the reconstruction of the water supply company Akulovsky.**

In Russia, these Krah pipes are sold under the trade name "Corsys" or "Corsys PLUS". In the Moscow region, the construction of a highway is ongoing, which will connect the Yaroslavskoe and Dmitrovskoe highways and also serve as a backup for the northern section of the Moscow Ring Road. According to the project, the new road will cross the open section of the

Akulovsky water channel, which will carry water from the Uchinsky reservoir to the first elevator of the Eastern Waterworks. In this connection, it became necessary to reorganize the open channels and replace them with large-diameter closed pipelines. The total length of the pipeline under construction will be 1.2 km.

To solve the problem, Corsys PLUS pipes with a diameter of DN/ID3500mm were chosen. The products for the construction of the pipeline were supplied by the trading house DKO POLYPLASTIC. In Klimovsky Pipe Plant of POLYPLASTIC

Group the production of Corsys pipes with diameter of DN/ID3500mm was started in 2022. Large-diameter Corsys PLUS pipes are specially designed for installation of main networks of domestic, industrial and storm water sewers. At the same time, they can be used in the construction of water supply and sewage networks with a working pressure of up to 0.6 MPa.

Corsys PLUS polymer piping systems have good hydraulic and physical-mechanical properties, high corrosion resistance, resistance to aggressive media and low growth of vegetation. The installation



*Loading the pipes onto the truck*

of the pipeline with embedded electric heaters is automatic, all this ensures high reliability of the structure throughout its life - more than 50 years. Thus, Corsys PLUS series pipes with a diameter of DN/ID3500mm were used for the first time in water pipeline construction. Their use in the reconstruction of the Akulovsky water canal in the area of road construction will minimize the negative impact of vehicles with heavy traffic on this section of the road, which is adjacent to the sanitary protection zone of the canal, for decades to come. The project is scheduled for completion by the end of this year. Author: Polyplastic Group, Moscow



*Pipes ready for installation*



# Stormwater catch basin for Tagum City using 100m of Krah pipes DN/ID3000mm

**Philippines, an archipelago of seven thousand, six hundred islands and counting, has been in continuous threats of climate change, drought, and other environmental risks. Located along the pacific ring of fire in the group of Southeast Asia countries, which serves as a geographical challenge for the country, it also has drastically increases its population growth by 323% from 26 million to 110 million Filipinos after its liberation at the end of WWII.**

The Philippines is composed of three major islands, Luzon, Visayas and Mindanao. Luzon is the largest in terms of area and population which is 60% of the whole country's population and houses the national capital region of Manila, followed by Mindanao which comprise the other 24% and Visayas being the least populated and has the smallest combined land area of its islands.

Mindanao has eight major river basins, namely the Agus river basin, Tagoloan river basin, Agusan river basin, Mindanao river basin (Cotabato), Cagayan de Oro river basin, Tagum-Libuganon river basin, Davao river basin and Buayan-Malungan river basin. The Mindanao River Basin (Cotabato) and Agusan River Basin in the Caraga region are among the two largest river basins in the island region. According to the Mindanao 2020 Peace



*Tagum City main road, Pan-Philippine Highway*

and Development Framework, Mindanao is endowed with rich ecosystems and dominated by fertile river basins and watersheds, but these have been threatened by heavy reliance on extractive industries such as logging, fisheries and mining alongside its population growth and residential developments.

One of the largest provinces of Mindanao is Davao Del Norte where in Tagum is a component city strategically located at the heart of Davao del Norte. According to the 2020 census, it has a population of 296,202 people making it the most

populous component city in Mindanao. While an inland city, Tagum also has a coastal area that relates to major road systems. The city functions as the seat of the Provincial Government and serves the commercial and agricultural center to other major cities in the rest of Mindanao. During the previous years, flooding and landslides are frequent in the city of Tagum with an estimated occurrence of once every year, usually along Tagum-Liboganon and Hijo Rivers, and the coastal area. Since most of the city's barangays are located by the rivers and the coastal area, these became a hazardous problem of the

Department of Public Works and Highways Region XI (DPWH-Region XI) which is responsible for public roads, stormwater collection and drainage systems and other public infrastructure projects of the government. In the aftermath of Typhoon Bopha (Pablo) in 2012, the strongest to ever hit Mindanao, the province lost PHP 4 billion worth of crops. The year after, in 2013, typhoon Podul (Zoraida) struck shortly after Haiyan (Yolanda). In Tagum, waist-deep flood water affected 462 families across eleven barangays.

It was reported that early this year, January of 2022, Tagum City Government in Davao del Norte has declared a state of calamity due to incessant rains that triggered flooding which resulted

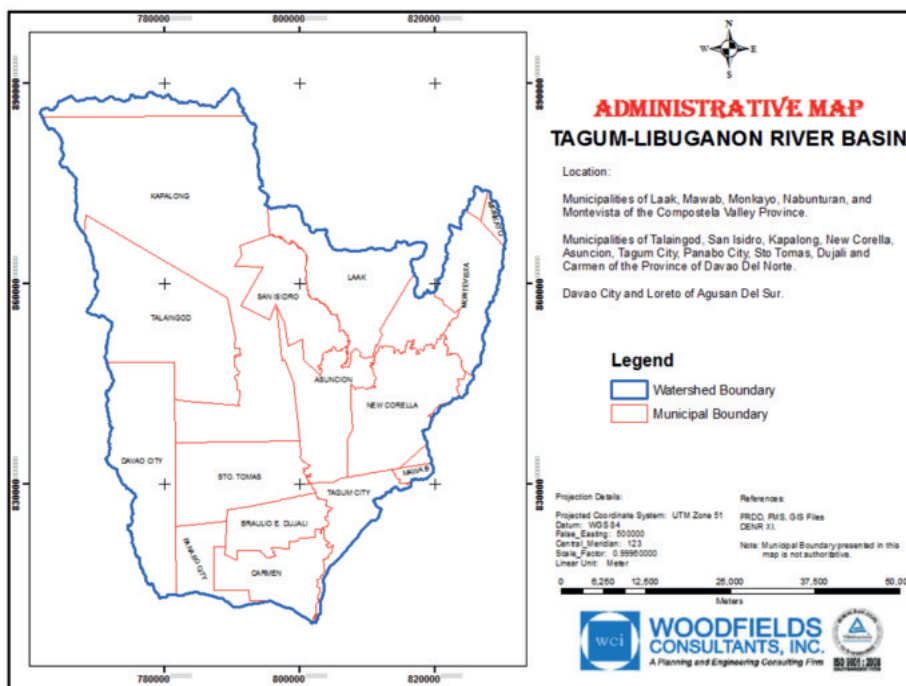
Resources (DENR) and other government agencies joined hand in hand to form the Integrated Flood Resilience and Adaptation Project that started last year, 2021. This group is pushing for an integrated effort to protect and sustain the island's fertile river basins and watersheds and mitigate the tremendous flooding problem it the whole of Mindanao.

The Tagum-Libuganon River Basin (TLRB) covers a total area of 3,151 km<sup>2</sup>. It is drained by three (3) main tributaries - the Tagum-Libuganon River (1,272 km<sup>2</sup>); the Saug River (1,075 km<sup>2</sup>); and the Tuganay River (804 km<sup>2</sup>). The rivers of the TLRB drain into the Davao Gulf in the southern part of the basin. The Tagum-Libuganon River collects runoff from the



*Pre-jointing of DN/ID 3000mm Krah pipes along Tagum rd.*

Only 10% of the TLRB presents elevations higher than 500 masl. (Integrated Flood Resilience and Adaptation Project 1, March 2022). Originally, the stormwater collector of the city is designed using reinforced concrete open canals but has been proven ineffective due to heavy siltation, clogging and overflow. The floodings was brought about by poor flood control and drainage facilities and was compounded by the effects of climate change i.e. too high flood discharges. From the technical point of view, the floodings was found out due to insufficient draining capacity of the waterways. Further, the decreased carrying capacity of these waterways, either natural or man-made is caused by watershed degradation i.e erosion and the natural phenomenon of land and riverbank slides which contribute furthermore to sedimentation of the waterways or rivers. First of the implemented solution is a stormwater catch basin along the major



to damages worth P3 million in both agriculture and infrastructure. In lieu of this, the key river basin stakeholders in Mindanao together with DPWH Region XI, Department of Environmental and Natural

hills of Kapalong and Talaingod, located in the northwestern part of the basin, with peak elevations higher than 1,000 masl. The remaining upstream areas, from north to east, do not exceed 500 masl.



road of Tagum city which uses a large diameter HDPE pipeline of DN/ID 3000mm. The first phase has already started of about 100 linear meter approaching the outfall towards Tagum-Libuganun River.

The three-meter diameter pipes were pre-jointed on the side of the road and

will be installed off-road that will connect to the existing open canals made of concrete. The totality of the program aims to replace the existing open canals with Krah pipes in varying diameters as it go upstream towards the heart of Tagum city.

Up to the date of this writing, this is the largest diameter of HDPE pipes that has

been installed in the country. With the full support of DPWH and DENR, we at Krah Asia are looking forward in being one of the components of solution to the flooding problem in the country and even in the whole of Southeast Asia.

Author: Jen Lansangan, Krah Asia





# Funes Industrial Park Project

## 2,7km of Krah pipes installed in Santa Fe, Argentina



**The Funes Industrial Park, was born from a private investment and strategic work in the southeast region of the province of Santa Fe, whose purpose is the industrial development and the main engine for regional economic growth.**

They call the place the triple border, since it limits to the south with Pérez and to the east with Rosario. The imposing place rises to the southeast of Funes, on the southern side of the Rosario-Córdoba Highway and will be one of the

fastest growing areas in the country, with unprecedented dimensions in the region.

At the request of the environment entity, and to take care of the area, 20,000 trees of more than 15 species will be planted, added to 20 ha of green space outdoors. More than 2,000 construction jobs will also be generated and after it is up and running, 10,000 jobs are projected for Rosario and the region. The project carried out by local engineering consultants, in some of its points, is based on the construction of a storm drain for the 260 hectares that comprise the property.

This project consists of a main laying of corrugated HDPE pipes in DN/ID1800 mm and secondary laying ranging from DN/ID400mm to DN/ID1200mm. HDPE pipes joined by a double rubber ring and with a useful length of 6 meters were installed throughout the laying. The total number of installed meters of Krah pipes in all their diameters was 2,720 kilometers. Thanks to the ease of transfer, handling and installation on site of the Krah Corrugated HDPE pipes, it was possible to optimize yields, substantially reducing work times. Author: Krah America Latina, Argentina

# El Dabaa - Egypt's first power plant built with Krah pipes

Text from Wikipedia ([https://en.wikipedia.org/wiki/El\\_Dabaa\\_Nuclear\\_Power\\_Plant](https://en.wikipedia.org/wiki/El_Dabaa_Nuclear_Power_Plant))

El Dabaa Nuclear Power Plant is the first nuclear power plant planned for Egypt and will be located at El Dabaa, Matrouh Governorate, Egypt, about 320 Kilometers northwest of Cairo. The plant will have four VVER-1200 reactors, making Egypt the only country in the region to have a Generation III+ reactor.

The Nuclear Power Plants Authority (NPPA) submitted applications for construction permits for units 1 and 2 in June 2021, and applications for units 3 and 4 in December 2021. The permit for unit 1 was issued by the Egyptian Nuclear and Radiological Regulatory Authority (ENRRA) in June 2022.

First safety-related concrete was poured in July 2022. In October 2022, ENRRA gave construction approval for unit 2, whose construction started on 19 November.

In 2022, Korea Hydro & Nuclear Power was contracted to construct 82 ancillary buildings and structures. Doosan Enerbility was sub-contracted to build the turbine buildings and related structures for about \$1.2 billion.





# Latest Krah development - MF400

## The perfect machine for large PE and PP components



**We are happy to present our latest machine development: The MF400. As a "fully numerically controlled and automated production center for exact cutting of multiple objects", it offers a complete solution for the treatment of big PE and PP components.**

With the MF400, pipes in diameters of up to DN/ID3000mm can now be processed. Also, not only round holes can be milled into the pipe, but any geometrical shape. Also complete diagonal cuts are no problem. The new development is a lot more automated. It now works with six axes, an intelligent milling software along with a smart user interface that enables a fast and easy programming, a centric and

eccentric object position and a maximum cutting height of up to 3500 mm.

A centric clamping system along with intelligent features within the software



*Processed hole 900mm*

enable an easy and fast set up of the machine. Installation and training by our technicians only takes approx. six working

days. The MF400 can process any kind of accessories for a pipeline, you don't have to buy additional spare parts like manholes etc. The parts that have been processed by the machine are complete, there is no need for post-processing such as straightening out the cutting edges or similar.

Should you be interested now, please check out our YouTube video showing different cuts and examples on the new machine.



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