

  
**WEHOLITE**

 **MEGA PIPES**  
SOLUTIONS LTD

Making Sustainability a Passion

## WHY WEHOLITE

The urgent requirement for better Water, Sanitation and Drainage systems within the East African Region, that would be able to cope with larger volumes of waste and stormwater, in fast-growing urban environments; led us to study new large diameter pipe technology, already widely used with big success in other parts of the world. The visionary decision to opt for Weholite HDPE structured wall pipes, manholes, chambers and tanks based on the following selection criteria:

- *To be able to improve the Water, Sanitation and Hygiene of the African people using environmentally friendly solutions with proven carbon footprint benefits over traditional materials*
- *A durable solution that would provide a reliable system with a 100+ year service life, that would be far greater than traditional materials*
- *An offering that would, because of its lightweight nature, cause far less disruption to the local communities and sensitive conservation areas.*
- *A wide diameter range of pipes from 350mm up to 3000mm that would in turn allow us to factory build products of far higher quality than are currently available.*
- *To manufacture products that would provide the local community with skilled employment for decades to come.*
- *To finally bring Excellence to East Africa*

By choosing Weholite technology, under license, from Uponor Oy of Finland we have found the perfect partner. Weholite creates endless opportunities to provide best value solutions for drainage pipes, manholes, chambers, tanks and packaged water and wastewater treatment systems that attend to the growing need for such products in East Africa.

With Weholite we shall achieve our Vision to become the leader in innovative stormwater, sanitation and water storage solutions across the East African Region; providing innovative world class technology with systems holistically designed to meet customer needs. The purpose of this manual is to provide the reader with an insight into Weholite. Please read on and discover our conviction for innovation and sustainability.

## CONTENTS

	Page
1. The Company	5
2. Weholite, what is it	7
3. Weholite, leading in design solutions	9
4. Weholite Pipeline Systems	11
5. Weholite Potable (Drinking) Water Tanks	51
6. Weholite Storm, Wastewater and Chemical Tanks	67
7. Weholite Endless Solutions	83
8. Weholite Jointing Systems	93
9. Weholite, a World of Advantages	95





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## 1. MEGAPIPES SOLUTIONS LIMITED, THE COMPANY

The need for high quality, sustainable Weholite products across the whole of East Africa resulted in the formation of Megapipes Solutions Limited, sister companies based in Kenya and Tanzania\* respectively. Each company is housed in the most sophisticated Weholite factories to be found anywhere in the World, at Oaklands in Ruiru, Kiambu County and at Kigamboni, Dar es Salaam.

Manufacturing is carried out on a grand scale, with pipes to DN3000 internal diameter and sophisticated water management products fabricated in our automated production facilities. Megapipes Solutions Limited drives its vision of creating better infrastructure for the people of East Africa, ever onwards and upwards.

### Vision

Raising Living Standards for Generations to come

### Mission

To become the Regional Partner for providing Sustainable Stormwater, Sanitation and Water Storage Solutions, using Innovative World Class Technology and Unique Services tailored to Customer Needs.

### Values

- **Reliability** - Our products and services meet customer requirements for quality and timely implementation of projects to their full satisfaction.
- **Fairness** - We strive always for a fair deal, beneficial to all parties involved.
- **Respect** - Our business activities are based on mutual trust and respect with all our stakeholders.
- **Innovation** - We focus on the manufacturing and provision of sustainable solutions using unique technology and services tailored to customer needs.

*\*Megapipes Solutions Limited Tanzania is formerly Plasco Limited and has been formed alongside Plasco, with the objective to focus on local solutions for the growing requirements of Stormwater, Sanitation and Water Storage solutions, using the innovative WEHOLITE Structured Wall HDPE Pipe technology, under license from Uponor Infra Oy of Finland.*

*Founded in 1992, Plasco Ltd introduced Weholite into Tanzania in 2018 and continues to produce HDPE & PVC pipes on a vast scale, at its modern factory in Dar es Salaam.*



## 2. WEHOLITE, WHAT IS IT?

The technology of Weholite was developed in 1983 and since then it has provided great value to the construction industry. You can choose between customized and holistic designs or standard product solutions.

With Weholite, raw material properties have been combined with advanced production technology to create a lightweight engineered solution with superior loading capacity that is chemically inert and provides over 100 years design life. This means that designers, owners and operators can be confident that Weholite HDPE buried systems will have an in-service life of at least 100 years when materials, products and installation practices meet the appropriate requirements.

In the design of water distribution systems, Weholite HDPE structured wall pipes represent an interesting alternative because of their excellent physical, hydraulic and mechanical properties. Manufactured from corrosion-resistant HDPE, Weholite pipes behave differently to traditional steel, ductile iron, concrete and other pipe systems

With the largest range of diameters and the most sophisticated fabrication facilities in East Africa, the benefits of using Weholite are evident and are in line with East African Governments Infrastructure Strategies.

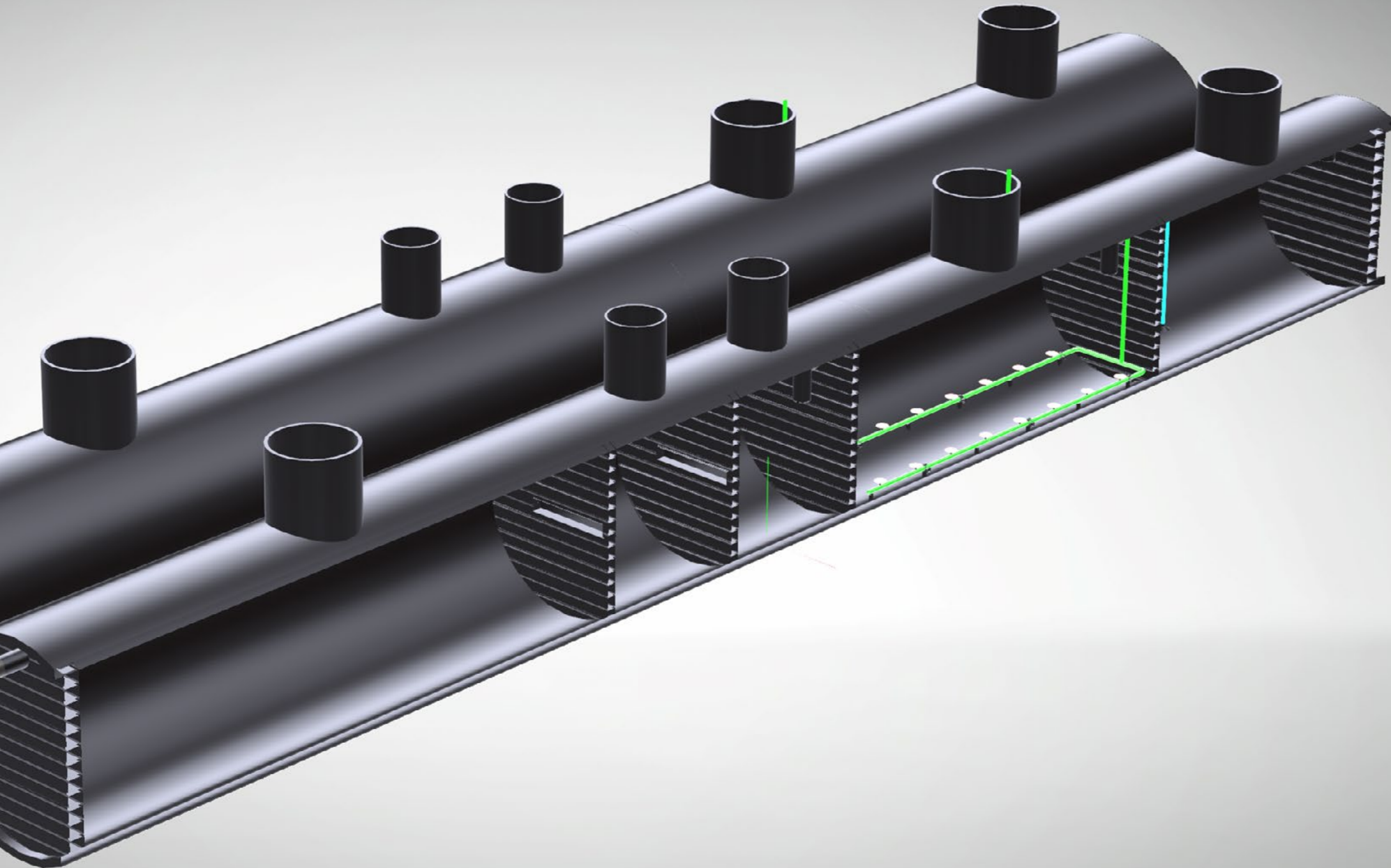
Weholite is manufactured and certificated to meet the material and performance requirements of ISO 21138 (part 1 & 2) and EN 13476 (part 1 & 2), Plastic Piping Systems for Non-Pressure Underground Drainage and Sewerage.

Internal Diameter (mm)	Standard Pipe Lengths (mtrs)	Pipe Stiffness Class (kN/m <sup>2</sup> )*
350	6, 12	4, 8
400	6, 12	4, 8
450	6, 12	4, 8
500	6, 12	2, 4, 8
600	6, 12	2, 4, 8
700	6, 12	2, 4, 8
800	6, 12	2, 4, 8
900	6, 12	2, 4, 8
1000	6, 12	2, 4, 8
1050	6, 12	2, 4, 8
1200	6, 12	2, 4, 8
1500	6, 12	2, 4, 8
1800	6, 12	2, 4, 8
2000	6, 12	2, 4
2200	6, 12	2, 4
2400	6, 12	2, 4
3000	6, 12	2, 4

\* Stiffness class as per ISO 21138-2/EN 13476-2

*The uniqueness of the Weholite production process means that pipes can be run in ANY length from 300mm to 30m in one piece. All projects are designed to optimise pipe length to ensure efficient installation and value engineering. Pipe stiffnesses below above SN8 and special designations in between the sizes above are available by special request.*

*All dimensions are subject to change. Please contact us for technical assistance.*

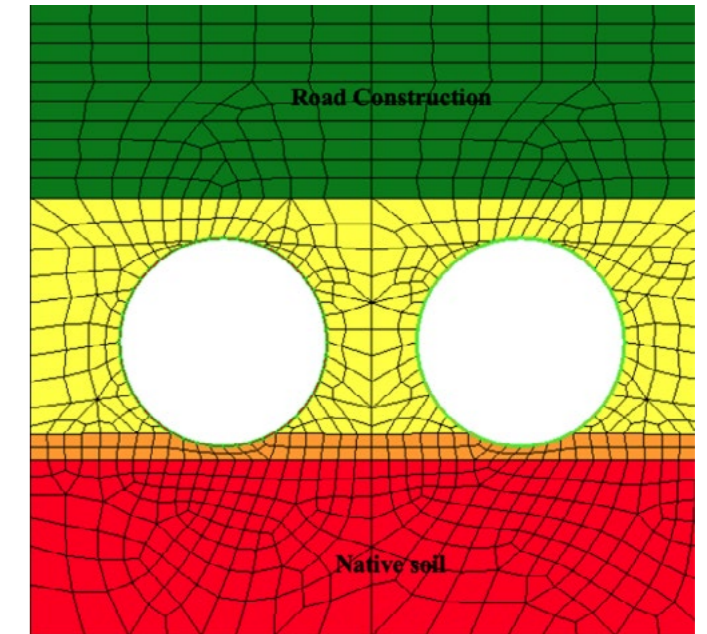


### 3. WEHOLITE LEADING IN DESIGN SOLUTIONS

Our philosophy of designing in confidence is equalled by our ability to partner with end users and provide unrivalled design capability. This extends to modelling of product behaviour during installation and when in service, identifying and reducing residual risks and fully collaborating with project stake holders in the important aspects of structural design.

We offer confidence and experience in the form of fully qualified engineers, the ability to design to industry standards for different sectors, understanding of water authority and municipality needs; but by far the most important quality of this whole company is the aptitude to listen.

The values of our engineering design people simply reflect the philosophy of the business; that is, to provide satisfaction by showing passion, creativity, fairness and respect. Innovative design is about trust. This we can offer you in abundance.



ISOMETRIC VIEW - COMBINED TANKS



#### 4. WEHOLITE PIPELINE SYSTEMS

Reliable piping is fundamental to the functioning and economy of any community. Whether it is freshwater distribution, highways drainage or for storm and wastewater management, these networks must be durable with a maintenance-free life expectancy running into decades. A properly installed Weholite piping system can easily pass 100 years without any detrimental effect on its integrity. We provide Weholite drainage pipelines manholes and chambers for virtually any requirement in civil construction. One of its main properties is the ability to work in synergy with the surrounding soil. In fact, Weholite pipes and the enveloping soil mass, working in tandem as a composite unit, is one of the most remarkably synergistic systems in engineering.

When the soil is properly compacted around the pipe, the load-carrying capacity of the pipe soil system far exceeds the individual capacity of either component by itself. This gives Weholite distinct advantages when used under road. Highway construction is not only a means of constructing a surface to carry vehicles, but in many cases, provides a route for all forms of water distribution services. The piping that is buried under the surface of the roads must have unique properties to withstand the continual dynamic pressures of heavy traffic passing on the road above. Weholite pipes are designed specifically with this in mind.

Weholite is used in a variety of pipeline applications from simple road or rail culverts to the more demanding sanitary networks. When used in conjunction with the endless array of bespoke chambers, manholes and fittings the Weholite system offers users opportunities to excel.

- Available in sizes from DN350mm to DN3000 (Refer to chapter 2)
- Fully compliant with ISO 21138 (Part 1&2) and EN 13476 (part 1&2)
- Value engineered for each and every project
- Gravity and low-pressure applications
- Available in lengths from 300mm to 30m in one piece
- Lightweight for superfast installation
- Variety of jointing systems to meet specific project requirements
- Totally resistant to Hydrogen Sulphide - H<sub>2</sub>S
- Excellent abrasion resistance
- Ultralow roughness coefficient. *Ks value - 0.03*
- Resulting in very low maintenance
- 100+ years design life



## WEHOLITE PIPELINE SYSTEMS CASE STUDY

Application	Road culvert
Project name	Kidatu to Ifakara road
Consultant	Nicholas O'dwyer Limited
Project owner	Tanzania National Roads Agency (TANROADS)
Project contractor	Reynolds Construction LTD
Location	Ifakara, Morogoro, Tanzania
Product specification	120m x DN1500 SN4 pipes
Site services	Installation supervision





## WEHOLITE PIPELINE SYSTEMS CASE STUDY

Application	Road culvert
Project name	Double stack culvert
Consultant	Geita Gold Mine
Project owner	Geita Gold Mine
Project contractor	Geita Gold Mine
Location	Geita, Tanzania
Product specification	840m x DN1200 SN4 pipes
Site services	Fusion jointing and installation supervision





## WEHOLITE PIPELINE SYSTEMS CASE STUDY

Application	Road culvert
Project name	Chene village access road culvert
Consultant	TANROADS - Dodoma
Project owner	Tanzania National Roads Agency (TANROADS)
Project contractor	Tanzania National Roads Agency (TANROADS)
Location	Dodoma, Tanzania
Product specification	24m x DN1800 SN4 pipes
Site services	Installation supervision





## WEHOLITE PIPELINE SYSTEMS CASE STUDY

Application	Road culvert
Project Name	Nakuru County Culverts
Consultant	Nakuru County Roads Department
Project Owner	Nakuru County
Project Contractor	Wakasi Enterprises
Location	Kandutura and Boito, Rongai, Kenya
Project Specification	DN2200 SN2 x 12m
Site Services	Installation Supervision





## WEHOLITE PIPELINE SYSTEMS CASE STUDY

Application	Road culvert
Project name	Installation of Culverts at the Ngorongoro Crater
Consultant	Ngorongoro Conservation Area Authority (NCAA)
Project owner	Ngorongoro Conservation Area Authority (NCAA)
Project contractor	Ngorongoro Conservation Area Authority (NCAA)
Location	Arusha, Tanzania
Product specification	140m x DN1200 SN4 pipes, 70m x DN900 SN4 pipes
Site services	Fusion jointing and installation supervision





## WEHOLITE PIPELINE SYSTEMS CASE STUDY

Application	Road culvert
Project name	Kiluvya to Kisarawe road culvert
Consultant	TANROADS - Coast Region
Project owner	Tanzania National Roads Agency (TANROADS)
Project contractor	Wright Construction LTD
Location	Visegese, Dar Es Salaam, Tanzania
Product specification	30m x DN1500 SN4 pipes
Site services	Installation supervision





## WEHOLITE PIPELINE SYSTEMS CASE STUDY

Application	Truck Sewer
Project Name	Donholm Sewer Relocation
Consultant	Mangat I.B. Patel (MIBP) Ltd.
Project Owner	Athi Water Works Development Agency
Project Contractor	Shaanxi Water Resources & Hydropower Engineering Group Company Limited
Location	Donholm, Nairobi, Kenya
Product specification	DN1500 SN2 x 375m
	DN1200 SN2 x 45m
	DN800 SN4 x 45m
Site services	DN1050 Access Shafts Pre-installation training, supervision, and fusion jointing





## WEHOLITE PIPELINE SYSTEMS CASE STUDY

Application	Truck Sewer
Project name	Narok Sewerage Infrastructure
Consultant	Mangat I.B. Patel (MIBP) Ltd.
Project owner	Rift Valley Water Board
Project contractor	Narok Sewerage Infrastructure
Location	Narok Town, Kenya
Product specification	5km x DN800 SN8 and 2 x DN1200 manholes
Site services	Pre-installation training and fusion jointing





## WEHOLITE PIPELINE SYSTEMS CASE STUDY

Application	Road culvert
Project name	Nessuit Community Road Culvert
Consultant	Nakuru County Roads Department
Project owner	Nakuru County
Project contractor	Nakuru County
Location	Nessuit Ward, Njoro sub-county, Nakuru County, Kenya
Product specification	DN1500 SN4 x 12m
Site services	Pre-installation training, Supervision





## WEHOLITE PIPELINE SYSTEMS CASE STUDY

Application	Stormwater drainage
Project name	Stormwater drainage line for Julius Nyerere International Airport, Terminal 3
Consultant	Howard Consulting Limited
Project owner	Tanzania Airports Authority (TAA)
Project contractor	BAM International
Location	Dar Es Salaam, Tanzania
Product specification	104m x DN1200 SN4 pipes
Site services	Fusion jointing and installation supervision





## WEHOLITE PIPELINE SYSTEMS CASE STUDY

Application	Stormwater drainage
Project name	Stormwater Line Oaklands Industrial Site
Consultant	Mangat I.B. Patel (MIBP) Ltd.
Project owner	Megapipes Solutions Limited & Osho Millers
Project contractor	Superfit Steelcon Limited
Location	Oaklands, Ruiru, Kenya
Product specification	Weholite pipe DN700SN2 x 606m Weholite pipe DN800SN2 x 116m Weholite Manhole DN1500 x 4 Weholite Manhole DN1200 x 7
Site services	Pre-installation training, supervision, and fusion jointing





## WEHOLITE PIPELINE SYSTEMS CASE STUDY

Application	Stormwater drainage
Project name	Relocation of stormwater line along Arusha Krokon road
Consultant	UWP Consulting Limited
Project owner	Tanzania Rural & Urban Roads Agency (TARURA)
Project contractor	Sinohydro Corporation LTD
Location	Arusha, Tanzania
Product specification	1km x DN700 SN4 pipes
Site services	Fusion jointing





## WEHOLITE PIPELINE SYSTEMS CASE STUDY

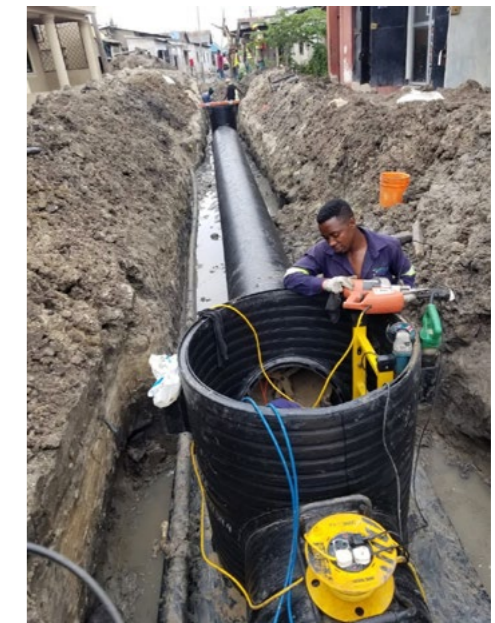
Application	Sanitary network
Project name	Extension of sewerage network
Consultant	Cheil Engineering Co. Limited
Project owner	Arusha Urban Water Supply & Sanitation Authority
Project contractor	Beijing Construction Engineering Group
Location	Arusha, Tanzania
Product specification	1,980m x DN800 SN4 pipes, 7,776m x DN700 SN4 pipes, 35pcs x Weholite backdrops - DN700 SN4 X DN355, 13pcs x Weholite backdrops - DN800 SN4 X DN400
Site services	Fusion jointing and installation supervision





## WEHOLITE PIPELINE SYSTEMS CASE STUDY

Application	Stormwater drainage
Project name	Tenge Luwiti Stormwater Drainage Phase 2
Consultant	UWP Consulting
Project owner	Dar es Salaam Metropolitan Development Projects (DMDP)
Project contractor	Chongqing International Construction Corporation (CICO)
Location	Tabata, Dar es Salaam, Tanzania
Product specification	DN600 SN4 x 40m, 2 x DN1000 Manhole Chambers and 2 x DN600n access shafts
Site services	Site services: Pre-installation training, supervision, and fusion jointing





## WEHOLITE PIPELINE SYSTEMS CASE STUDY

Application	Stormwater drainage
Project name	Kwashego Stormwater Drainage
Consultant	Kyong Dong Engineering Co Ltd
Project owner	Dar es Salaam Metropolitan Development Services (DMDP)
Project contractor	CRJE (East Africa) Ltd
Location	Mbagala, Dar es Salaam, Tanzania
Product specification	DN1500 SN2 x 219m and 2 x 12m x DN1500 Pipes with DN1000 Access Shafts
Site services	Pre-installation training, supervision, and fusion jointing





## WEHOLITE PIPELINE SYSTEMS CASE STUDY

Application	Sanitary network
Project name	Kiwalani, Dar es Salaam
Consultant	UWP Consulting
Project owner	TARURA
Project contractor	CRJE
Location	Kiwalani, Dar es Salaam, Tanzania
Product specification	DN1200 SN4 x 59m, 1 x 90° Elbow intake structure with DN600 connections and 1 x DN800 access shaft
Site services	Pre-installation training, supervision and fusion jointing





## WEHOLITE PIPELINE SYSTEMS CASE STUDY

Application	Sanitary network
Project Name	Kijani 1BB
Consultant	Frame Consultants Ltd
Project Owner	Tatu City
Project Contractor	Stecol Corporation
Location	Tatu City, Kiambu County
Product specification	<ul style="list-style-type: none"> <li>• DN400 SN4 x 1397m</li> <li>• DN450 SN4 x 51m</li> <li>• DN600 SN2 x 82m</li> <li>• DN700 SN2 x 192m</li> <li>• DN800 SN2 x 114m</li> <li>• DN1050 SN2 x 51m</li> <li>• DN1200 SN2 x 108m</li> <li>• DN1350 SN2 x 770m</li> </ul> <p>Various bends, access shafts, junctions and manholes with ladders.</p>
Site services	Pre-installation training, supervision and fusion jointing





## WEHOLITE PIPELINE SYSTEMS CASE STUDY

Application	Flood mitigation
Project Name	Sebeya Outfall Project
Consultant	JV IBC Services & Gibb Africa
Project Owner	Rwanda Water Resources Board (RWB)
Project Contractor	NPD Limited
Location	Gisenyi, Rwanda
Product specification	729m x DN1000 SN8 Pipes (14m Lengths)
Site services	Fusion jointing and air testing of pipelines





## WEHOLITE PIPELINE SYSTEMS CASE STUDY

Application	Stormwater drainage
Project Name	Tembo Mgwaza Stormwater Drainage
Consultant	UWP Consulting Limited
Project Owner	Tanzania Rural and Urban Roads Agency
Project Contractor	Chongqing International Construction Corporation (CICO)
Location	Tabata, Dar es Salaam
Product specification	<ul style="list-style-type: none"> <li>• 800m x DN1000 SN2 Pipes</li> <li>• 1 x Connecting Chamber - DN1000 SN2</li> <li>• 14 x DN1000 SN2 x DN800 Access Shafts</li> <li>• 8 x DN1000 SN2 Access Shafts with 300mm drop.</li> <li>• 11 x DN1000 SN2 x DN800 Access Shafts with bend.</li> <li>• 2 x DN1000 SN2 Y Junction</li> </ul>
Site services	Fusion Jointing & Installation Supervision





## 6. WEHOLITE POTABLE (DRINKING) WATER TANKS

When it comes to providing factory-built products Weholite really soars. The benefits of Weholite pipes can be utilised for potable water storage both above and below ground for uniquely designed applications or in standard product applications.

All Weholite products, combine advanced HDPE material properties with advanced production technology to create a lightweight engineered solution with a superior loading capacity. Weholite is chemically inert and provides a 100-year below ground and up to 60-year\* above ground design life.

Weholite has been used to provide offsite build solutions from packaged pumping chambers; to chlorine contact tanks and many other similar products including balance and filtration tanks. We are able to undertake design, produce drawings, manufacture and deliver these types of vessel to site as completed units ready to simply connect up and commission.

Items are prefabricated at our automated production facilities in Dar es Salaam and Nairobi using computer-controlled technology. All products are pre-slung and lifted straight from the lorry and into place, saving time in design, construction and in the plant required; eliminating the need for largescale construction and shortening programme time.

- Major savings on programme
- Available in sizes from DN350 to DN3000
- Value engineered for each and every project
- Gravity and low-pressure applications
- Lightweight for superfast installation
- Totally resistant to most chemicals
- 100+years buried design life
- Up to 60years\* above ground design life
- Designed to resist groundwater pressures
- Available in any orientation
- Fully tested, factory-built components
- Complete with lifting points
- Concrete surround not required
- Ready to use immediately upon delivery
- Lighter plant and less labour required
- Low maintenance
- Major savings on programme
- For use as storage, contact and inter-process pipework
- Bespoke designs and full structural design service
- Best abrasion resistance
- Better flow properties
- \*Dependant on climatic conditions



## WEHOLITE POTABLE (DRINKING) WATER TANKS CASE STUDY

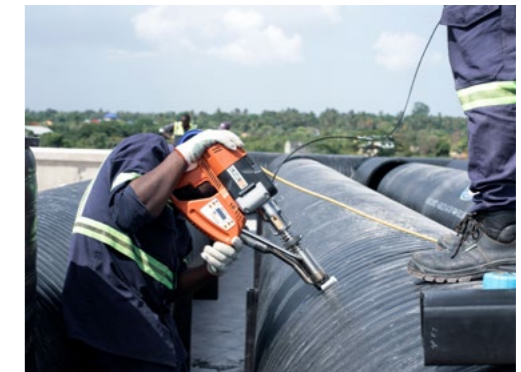
Application	Raw water treatment
Project name	Homabay
Consultant	John Cockerill Limited
Project owner	Lake Victoria South Water Works Development Authority
Project contractor	John Cockerill Limited
Location	Homabay, Kenya
Product specification	4 x Chlorine Contact tanks DN1200 - 1600L per tank. 4 x Sodium Carbonate tanks DN1500 - 4200L per tank. 4 x Aluminum Sulphate tanks DN1500 - 4800L per tank
Site services	Pre-delivery route survey, delivery, positional offloading, installation and hydrostatic testing





## WEHOLITE POTABLE (DRINKING) WATER TANKS CASE STUDY

Application	Freshwater storage
Project name	Rooftop Tank
Consultant	CPS - Fumba Town Development
Project owner	CPS - Fumba Town Development
Project contractor	CPS - Fumba Town Development
Location	Zanzibar, Tanzania
Product specification	Water Tank - DN2200 SN2 (50m <sup>3</sup> )
Site services	Fusion jointing and air testing





## WEHOLITE POTABLE (DRINKING) WATER TANKS CASE STUDY

Application	Raw water storage
Project Name	Potable Water Tank
Consultant	Rural Water Supply & Sanitation Agency (RUWASA)
Project Owner	Rural Water Supply & Sanitation Agency (RUWASA)
Project Contractor	Rural Water Supply & Sanitation Agency (RUWASA)
Location	Kigoma, Tanzania
Project Specification	Water Tank - DN2200 SN2 (100m <sup>3</sup> )
Site Services	Installation, fusion jointing and air testing





## WEHOLITE POTABLE (DRINKING) WATER TANKS CASE STUDY

Application	Freshwater storage
Project Name	Potable Water Tank
Consultant	Irvines (T) Limited
Project Owner	Irvines (T) Limited
Project Contractor	Irvines (T) Limited
Location	Moshi, Tanzania
Project Specification	Water Tank - DN2200 SN2 (300m <sup>3</sup> )
Site Services	Installation, fusion jointing and air testing





## WEHOLITE POTABLE (DRINKING) WATER TANKS CASE STUDY

Application	Freshwater storage
Project Name	Potable Water Tank
Consultant	Rural Water Supply & Sanitation Agency (RUWASA)
Project Owner	Rural Water Supply & Sanitation Agency (RUWASA)
Project Contractor	Medes Company Limited
Location	Dodoma, Tanzania
Project Specification	Water Tank - DN2200 SN2 (150m <sup>3</sup> )
Site Services	Installation, fusion jointing and air testing





## WEHOLITE POTABLE (DRINKING) WATER TANKS CASE STUDY

Application	Freshwater storage
Project Name	Potable Water Tank
Consultant	Rural Water Supply & Sanitation Agency
Project Owner	Rural Water Supply & Sanitation Agency
Project Contractor	Rural Water Supply & Sanitation Agency
Location	Kigoma, Tanzania
Project Specification	Water Tank - DN2200 SN2 (300m <sup>3</sup> )
Site Services	Installation, fusion jointing and air testing





## WEHOLITE POTABLE (DRINKING) WATER TANKS CASE STUDY

Application	Freshwater storage
Project Name	Potable Water Tank
Consultant	Shanta Mining Limited
Project Owner	Shanta Mining Limited
Project Contractor	Shanta Mining Limited
Location	Singida, Tanzania
Project Specification	Water Tank - DN2200 SN2 (150m <sup>3</sup> )
Site Services	Fusion jointing and air testing





## 6. WEHOLITE STORM, WASTEWATER & CHEMICAL TANKS

If ever there was a flagship product that truly represents our innovative values, it is Weholite HDPE Storage and Treatment Tanks.

It has long been a dream of the construction industry to be able to replicate the lean, efficient and precision-built principles of factory manufacturing into the sector and the benefits they would bring.

Whilst it is difficult to challenge the benefits of this philosophy, there is also an industry mindset to overcome. The decision to take the factory-built route involves a value judgment on behalf of the buyer. He or she must take into account the whole project cost and the benefits that these products can bring, such as superior quality, programme reductions, consistency, sustainability etc.

Weholite HDPE Storage and Treatment Tanks are revolutionary for this region. They represent the epitome of sound value engineering. They are truly bespoke products, delivered in quick time, that can be installed and connected in minutes. At last authorities, municipalities, specifiers and installers can provide factory-built quality to the user, that has been designed and tested and is manufactured offsite using the latest state of the art technology available anywhere in the World.

- Major savings on programme
- Available in sizes from DN350 to DN3000
- Fully compliant with ISO 21138 (part 1&2) and EN 13476 (part 1&2)
- Value engineered for each and every project
- Gravity and low-pressure applications
- Lightweight for superfast installation
- Totally resistant to Hydrogen Sulphide – H<sub>2</sub>S
- 100+years design life
- Designed to resist groundwater pressures
- Available in any orientation
- Fully tested, factory-built components
- Complete with lifting points
- Concrete surround not required
- Rocker pipes not required
- Ready to use immediately upon delivery
- Lighter plant and less labour required
- Best abrasion resistance
- Better flow properties
- Low maintenance



## WEHOLITE STORM, WASTEWATER & CHEMICAL TANKS CASE STUDY

Application	Chemical treatment tanks
Project Name	Nachu Graphite Project
Consultant	Mantra Tanzania Limited
Project Owner	Uranium One Group
Project Contractor	Mantra Tanzania Limited
Location	Lindi, Tanzania
Product specification	<ul style="list-style-type: none"> <li>• Chemical Tank - DN2200 SN2 (2.98m, 10m<sup>3</sup>) x 3</li> <li>• Chemical Tank - DN1800 SN2 (1.8m, 4m<sup>3</sup>)</li> <li>• Chemical Tank - DN1500 SN2 (2.1m, 3m<sup>3</sup>)</li> <li>• Chemical Tank - DN1500 SN2 (2.9m, 4.8m<sup>3</sup>)</li> <li>• Chemical Tank - DN1000 SN2 (1.6m, 1.2m<sup>3</sup>) x 2</li> <li>• Chemical Tank - DN1500 SN2 (3.17m, 5.5m<sup>3</sup>)</li> <li>• Chemical Tank - DN1500 SN2 (1.8m, 3m<sup>3</sup>)</li> <li>• Chemical Tank - DN2200 SN2 (3m, 11m<sup>3</sup>)</li> <li>• Chemical Tank - DN1500 SN2 (1.5m, 2.6m<sup>3</sup>)</li> </ul>
Site services	-





## WEHOLITE STORM, WASTEWATER & CHEMICAL TANKS CASE STUDY

Application	Septic tanks
Project Name	East African Crude Oil Pipeline (EACOP)
Consultant	WASCO ISOAF Limited
Project Owner	East African Crude Oil Pipeline (EACOP)
Project Contractor	East African Crude Oil Pipeline (EACOP) Limited
Location	Tabora, Tanzania
Product specification	<ul style="list-style-type: none"> <li>Septic Tank - DN2200 SN2 (120 PE) x 2</li> <li>Septic Tank - DN2200 SN2 (120 PE) x 3</li> </ul>
Site services	-





## WEHOLITE STORM, WASTEWATER & CHEMICAL TANKS CASE STUDY

Application	Oil separation system
Project Name	KIOO
Consultant	KIOO Limited
Project Owner	KIOO Limited
Project Contractor	Potential Builders Limited
Location	Dar es Salaam Weholite Oil Water Separator - DN1800 SN2 (18m <sup>3</sup> ) - Underground Weholite Skimmed Oil Storage Tank - DN1800 SN2 (3m <sup>3</sup> ) - Underground Weholite Water Storage Tank - DN2200 SN2 (60m <sup>3</sup> ) - Underground
Product specification	
Site services	Fusion jointing and installation supervision





## WEHOLITE STORM, WASTEWATER & CHEMICAL TANKS CASE STUDY

Application	Chemical storage
Project name	Chemical Storage Tanks
Consultant	Songas Limited
Project owner	Songas Limited
Project contractor	Songas Limited
Location	Dar es Salaam, Tanzania
Product specification	<ul style="list-style-type: none"> <li>• Chemical Tank - DN1000 SN2 (1m<sup>3</sup>) x 2</li> <li>• Chemical Tank - DN1000 SN2 (5m<sup>3</sup>)</li> <li>• Chemical Tank - DN2200 SN2 (20m<sup>3</sup>)</li> </ul>
Site services	Installation Supervision





## WEHOLITE STORM, WASTEWATER & CHEMICAL TANKS CASE STUDY

Application	Wastewater treatment
Project name	Waterforce Packaged WWTP
Consultant	Waterforce Kenya Limited
Project owner	Waterforce Kenya Limited
Project contractor	Waterforce Kenya Limited
Location	Kitale, Kenya
Product specification	DN2000 x 10m with baffle walls, access shafts, ladders and inlet and outlet stubs
Site services	Installation supervision





## WEHOLITE STORM, WASTEWATER & CHEMICAL TANKS CASE STUDY

Application	Flood alleviation tank
Project name	10,000m <sup>3</sup> Meadowhead combined sanitary/stormwater flood control tank
Consultant	Black & Veatch Ltd
Project owner	Scottish Water
Project contractor	MBV (Morrison Const. and Black & Veatch)
Location	Kilmarnock, Scotland
Product specification	2km x DN2600 & DN2100 SN2 pipes with manifolds and access shafts
Site services	Pre-installation training, fusion jointing and air testing





## WEHOLITE STORM, WASTEWATER & CHEMICAL TANKS CASE STUDY

Application	Rainwater recycling
Project name	182m <sup>3</sup> Rainwater Harvesting Tank
Consultant	Mangat I.B. Patel (MIBP) Ltd.
Project owner	Megapipes Solutions Limited
Project contractor	Superfit Steelcon Ltd
Location	Ruiru, Kenya
Product specification	DN2200 SN2 x 48m, Tank ends, access shafts, submersible pump, inlet and outlet
Site services	Installation supervision and fusion welding





## 8. WEHOLITE - ENDLESS SOLUTIONS

Weholite has the potential to be transformed into a myriad of different solutions that contribute to what can only be described as true innovation. The list below and the case studies following give an overview of just some of the potential it has to offer. Mindful of this, before you start your next project, I would urge you to contact us, arrange a visit and indulge your inventive spirit. Weholite exists for you, the customer, and together we make sustainability a passion.

### WEHOLITE PIPES

- Culverts for road and rail
- Slip lining obsolete culverts
- Stormwater drainage
- Sanitary networks
- Surface water run off
- Perforated pipes
- Sewer relining
- Inter-process pipework
- Marine pipelines
- Hydro-electric pipeline
- Ventilation pipework
- Cooling water intake lines
- Above ground pipework
- Sea outfalls

### MANHOLE & CHAMBERS

- Oversize stormwater manholes
- Oversize Sanitary manholes
- Access shafts
- Inspection chambers
- Flow control chambers
- Flow meter chambers
- Valve chambers
- Wet wells
- Concrete chamber relining
- Collection chambers
- Static screen chambers
- Backwash chambers
- Duct and cable pits
- Separator chambers
- Soakaway chambers

### POTABLE WATER

- Potable water tanks
- Balance tanks
- Disinfection tanks
- Buried tanks
- Above ground tanks
- Flow control chambers
- Flow meter chambers
- Valve chambers
- Wet wells
- Concrete chamber relining
- Aeration tanks
- Packaged pump chambers

### STORMWATER & WASTEWATER

- Septic tanks
- Storage tanks
- Packaged treatment plants
- Buried tanks
- Above ground tanks
- Stormwater retention tanks
- CSO retention tanks
- Rainwater harvesting tanks
- Wet wells
- Concrete tank relining
- Packaged pumping stations
- Lift stations
- Effluent tanks
- Chemical tanks
- Flocculation tanks
- Biogas and anaerobic digestion



**WEHOLITE - ENDLESS SOLUTIONS CASE STUDY**

Application	Floating pontoons
Project Name	Pontoons for floating pump stations
Consultant	Wave International, Australia
Project Owner	Base Titanium
Project Contractor	SECO Kenya
Location	Kwale, Coast Region, Kenya
Project Specification	DN1200 Floating Pontoons x 3
Site Services	Assembly Supervision





**WEHOLITE - ENDLESS SOLUTIONS CASE STUDY**

Application	Marine outfall
Project Name	Pattaya Storm Outfall
Consultant	Pattaya Municipality
Project Owner	Pattaya Municipality
Project Contractor	Uponor PS and Wiik Public Co. Ltd.
Location	Phra Tamnak Beach, South Pattaya, Thailand
Product specification	1.1km x DN1800 SN4, 5 x 225m flanged strings. Diffuser section with DN SDR26 Solid wall HDPE Ports in DN1000 with flanges and a 47° bend.
Site services	Assembly, fusion welding, grouting and installation supervision





## WEHOLITE - ENDLESS SOLUTIONS CASE STUDY

Application	Latrine pits
Project name	Replacement Housing Project
Consultant	East African Crude Oil Pipeline (EACOP) Limited
Project owner	East African Crude Oil Pipeline (EACOP)
Project contractor	East African Crude Oil Pipeline (EACOP) Limited
Location	Various, Tanzania
Product specification	<ul style="list-style-type: none"> <li>Pit Latrine - DN1500 SN2 (2.45m) with 16mm Perforations - 400pcs</li> <li>Pit Latrine - DN1800 SN2 (2.45m) with 16mm Perforations - 400pcs</li> </ul>
Site services	-





## WEHOLITE - ENDLESS SOLUTIONS CASE STUDY

Application	Culvert Renovation
Project name	A104 Culvert Relining
Consultant	KeNHA
Project owner	Kenya National Highways Authority (KeNHA)
Project contractor	Offrey Technologies Limited
Location	Corridor B, A8 on the A104 Nairobi to Naivasha, Kenya
Product specification	DN700 x 18m long x 3 number reline culverts, complete with spacers and grouting conduit.
Site services	Fusion welding and installation supervision





## 9. WEHOLITE JOINTING SYSTEMS

It is important that the most efficient method of jointing is used to ensure the pipeline remains watertight, durable and effective for potentially excessive movement in poor ground conditions; and depending on application, there are different methods of jointing Weholite.

### **Heat Extrusion Jointing**

This process, carried out by direct Weholite personnel, provides an economical and fast method of delivering a complete, long, continuous length of pipeline, which allows the joint to be as strong as the pipe itself. Extrusion welding is a semi-mechanical process for thick-walled pipes where a higher level of joint integrity is required.

Extrusion welded joints are proven in tests to be the industry's strongest and most reliable method for joining structured wall pipes. The German DVS standard tests them to a 50% greater force than other welding processes such as electrofusion.

The fusion welded jointing system is not susceptible to root intrusion or breakages and behaves homogeneously with excessive ground movement.

Extrusion welding has a proven track record globally for large diameter pipes up to 3500mm diameter, providing the safest and most versatile solution on the market whilst still improving the efficiency and adding value to the overall project.



### **Flexseal Couplings**

Flexseal Extra Wide Couplings are used principally for connecting Weholite internal diameters of DN350 to DN2200. Weholite Flexseal Couplings are 300mm wide, which allows for greater tolerance in the cutting of the ends of the pipe as well as providing for the movement of pipes due to settlement or thermal effects.

### **Lateral connections**

The Water Research Council approved, Universal Adaptor Saddle; manufactured by Flexseal, can be used with Weholite. When used in conjunction with a Flexseal coupling it is an easy to fit product for connecting 160mm laterals into Weholite post installation.

*\*Please contact us for advice on the most suitable system to fulfill your requirements.*



## 10. WEHOLITE, A WORLD OF ADVANTAGES

In order to protect us all from the old “cheap and nasty” adage there are numerous international and national standards and, in many cases, national regulations and requirements. The water and construction industries, and the products and services used therein are no different and compliance with applicable standards ensures that customers can be safe in the knowledge that money has been spent on products that comply and are approved to applicable standards.

ISO 21138 (part 1&2) and EN 13476 (part 1&2), Plastic Piping Systems for Non-Pressure Underground Drainage and Sewerage covers all aspects of the system for foul and surface water sewers, some of the main points that provide comfort and reassurance to the end users are raw materials, wall thicknesses, impact resistance, ring flexibility and structural design requirements.

Weholite pipes, manholes, fittings and systems do not suffer the same effects that other materials and types of systems do. They are manufactured in the factory and fully tested prior to delivery. Weholite adds value to the overall system by extending service life and lowering operating costs. It also reduces the risk of flood events to local communities.

Across the East African region, only Weholite can offer such innovative systems in HDPE. It is time for progress and innovation. It is time for Weholite.

### WEHOLITE ADVANTAGES

- *Light weight*
- *Flexible*
- *Easy to Handle and Install*
- *Impact Resistant*
- *Durable*
- *Superior Hydraulics Properties*
- *100% watertight jointing systems*
- *Fusion Welded Joints*
- *Abrasion Resistant*
- *Corrosion Resistant*
- *Environmental Deterioration Resistant*
- *Non-Toxic*
- *Much lower carbon footprint*
- *Environmentally Friendly Production*
- *UV-Resistant*
- *Reliability*
- *100+ year design life when buried*



Making Sustainability a Passion



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