
Xtract- Waste water treatment

Offshore oil in water removal below 1 ppm



Xtract is a further development of the **Xpel** series of oil in water removal systems for offshore applications. It consists of a compact containerized unit designed for treating slop, waste waters, and produced water offshore. The highly effective separation technology involves a unique membrane filtration process that avoids the build-up of filtrate blockages and results in close to zero ppm discharges. **Xtract** is built into a 13 ft container in compliance with the NOROK Z-015 standard and is approved for ATEX II/3G.

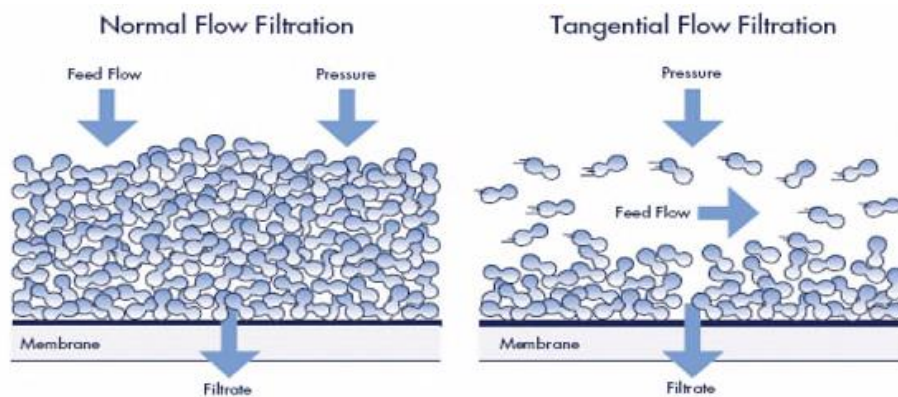
Applications

- Oily water treatment during cleaning operations
- Slop water treatment during drilling operations
- Produced water treatment

Technology

Feed water is pumped through a system of ceramic rods containing an array of tangential passages through which the oily water passes through. The rods are coated with a hydrophilic membrane, such that water passes through the membrane to the outside of the rod while leaving Hydrocarbons and particulates to be discharged through the tangentially arranged passages.

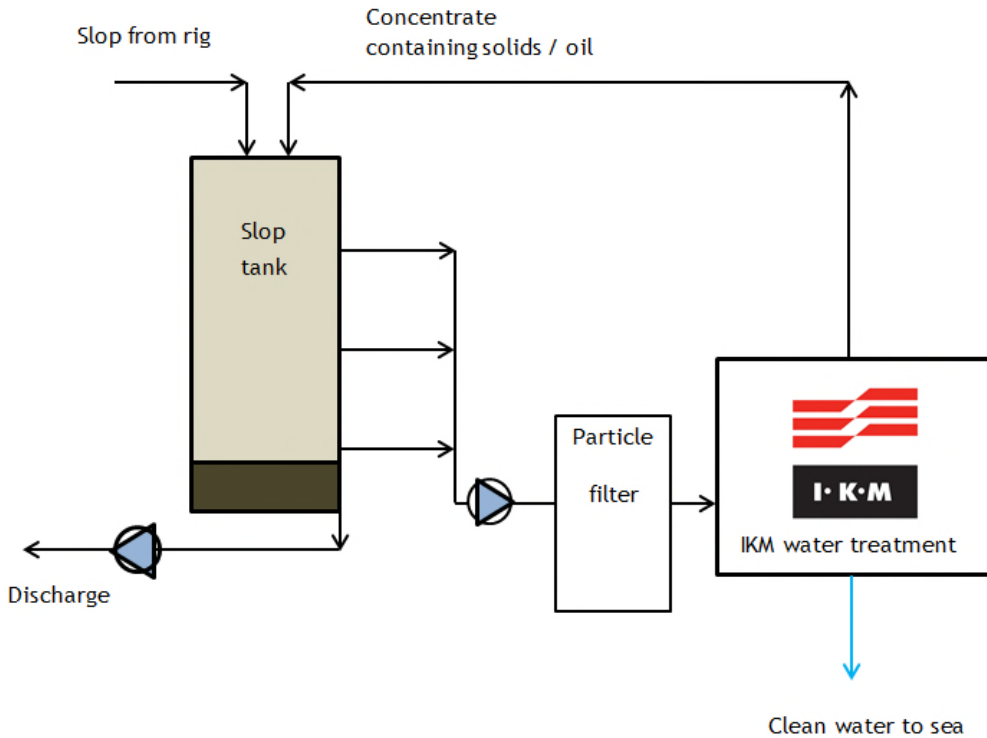
This process ensures that no blockages occur and that the separation is 100% effective.



Benefits

1. Treated discharge water - less than 1 ppm oil
2. No use of flocculent chemicals
3. 98% waste reduction on treated waste water streams.
4. Treatment capacity 10m³/hr for standard system
5. Easily upgradable for larger feed volumes.
6. Standard footprint - 13 ft container
7. No downtime (built in process redundancy)
8. Programmable - no need for 24 hr personnel operation.

Typical setup



Reporting

IKM Production Technology will deliver daily report, with treated volume, average PPM and total waste reduction.

1. GENERAL DETAIL							
Customer:						Date :	15.06.2015
Location :						Reporting Period:	00:00-24:00
Rig:						Hole Section:	N/A
Contractor:						Start Depth [m]:	N/A
Well:						Estimated TD Depth [m]:	N/A
Type of fluid:	OBM					Report Depth [m]:	N/A
2. OPERATION							
Items	Januar	Februar	Mars	April	Mai	Juni	
Discharged to sea [m3]	1 363	1 291	1 370	572	851		
Average PPM	0,56	0,54	1,03	0,72	0,68		
Waste sent onshore [m3]	31	45	31	24	54		
Monthly Sample Verification	Date	28.01.2015	11.02.2015	16.03.2015	17.04.2015	13.05.2015	
	Value	<0.5 mg/l	<0.5mg/l	<0.5mg/l	<1.0mg/l	<0,5mg/l	
Daily Reserve 5 tank monitoring [Untreatable]	Current standing Res 5 [m3]		Total pr. Month [m3]		Waste reduction in Total		
	60		0		95,7 %		
Equipment	Type	Serial No:	Daily Hrs. run	Tot. Hrs. run	Daily downtime		
XTRACT Unit	Waste Water Treatment Unit	709-2011	0	5914			
Oil in water analyser	HATR-T2	405-1009					
3. TOTAL TREATMENT OF WASTE WATER CURRENT MONTH							
Average PPM Feed [Inlet]	Average PPM of water to sea	Daily discharge to sea [m3]	Total oil to sea [Litres]	Total discharge to sea [m3]	Total untreatable sent onshore [m3]	Total Waste Reduction	
no measurement	0,41	0,0	0,07	179,0	8,0	95,7 %	



Specifications

CONTAINER

Size / weight 12ft / 9000 kg

MAIN POWER SUPPLY

Voltage 690 V/60Hz

PROCESS

Capacity 10m³/h

Design pressure 10 Barg

Intake temperature max 90 deg C

Design pH 2 - 12 pH

Material 316 L

Oil in Water Monitor Infracal TOG / TPH Analyzer

CERTIFICATION

Explosion Protection ATEX II / 3G

Container DNV 2.7.1

Equipment CE-Labeling

General Design Norsok Z-015

General Design Norsok S-002

CONSUMPTIONS

Power 120 kW

Patent

IKM Production Technology waste water unit is equipped with patented solutions for keeping Uniform Transmembrane Pressure.

Our Services

Reservoir fluid analysis

PVT

Chemical composition

Trace elements

Corrosion

Laboratory chemists - rental

Sample bottle rental

PVT - High pressure downhole samples

PVT-Surface samples

Long term storage

Flow assurance

Reservoir fluid sampling

PVT - Separator and wellhead

Isokinetic

Downhole - cased and open

Single phase

Mini phase-separator

High pressure sample transfer

Production Surveillance / Well Integrity

Memory gauge

Leak monitoring - annulus and tubing

Wireless Surface data acquisition

Drilling Waste Management

Oily wastewater

Produced Water

Cuttings Handling

Workshop services

High pressure equipment maintenance

Pressure testing

Fittings training

Sample bottle recertification and maintenance