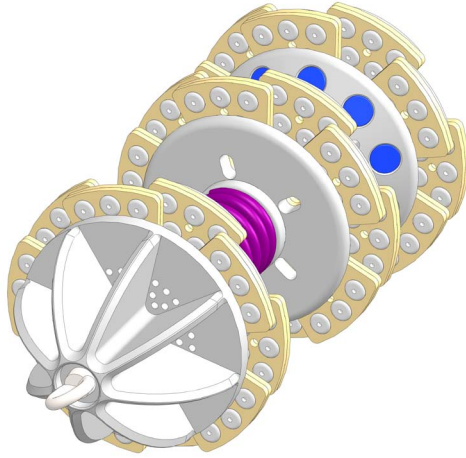




PRE-CLEANING-TOOL



Tool Data

Reinhart Mechanical Cleaning Tools (MCT) are tailor made.

Following pipe conditions, not related to each other, have already been cleaned.

Actual performed Ø range	mm min.	81mm
	mm max.	854mm
	inch min.	3"
	inch max.	36"
Bend size	min.	1.5D
Flow speed	min.	0.8m/s
	max.	1.50m/s

Descaling

10" lead pipeline to a dedusting system descaling.



Description

Developed in the 1970s, the **PRE-CLEANING-TOOL** is the pioneer of Reinhart Cleaning Technology (RCT).

Where no one has ever been able to get through, the **PRE-CLEANING-TOOL** will be used initially to establish a nominal through bore to bring the pipeline back to a position where the next cleaning tool type can be safely introduced. In pipelines with severely restricted diameters, the head diameter, initially undersized, is increased progressively with each cleaning run up to a nominal diameter that will allow the introduction of the Basic-Tool as part of the next cleaning phase.

Multiple design variations allow the **PRE-CLEANING-TOOL** to be used in a wide range of pipeline applications.

Field of Application

Reinhart Cleaning Technology (RCT) adapts to the pipe material as well as to the propulsion medium.

Following materials or flow natures, not related to each other, have already been cleaned.

Pipeline Material

- Carbon steel
- Cast iron
- Stainless steel
- PVC
- CRA
- Concrete
- HDPE, PTFE, PE
- Fiberglass

Propulsion Medium

- Water
- Crude oil
- Light fuel
- Multiphase
- Gas
- Brine
- Industrial product

Dewaxing

6" oil production pipeline dewaxing.





Company Presentation

Reinhart Hydrocleaning SA (RHC SA) is a family business based in Switzerland that has been providing a range of innovative, hydromechanical pipeline cleaning tools since 1952.

Designed and manufactured in house, the unique **Reinhart Cleaning Technology (RCT)** for pipeline cleaning can be applied to a broad range of industries onshore and offshore such as water, industry, natural gas or oil pipelines.

Besides cleaning various oil or industry pipelines with difficult to remove debris and or hard deposit build-up, **RHC SA** is often selected when pipeline requires internal metal loss inspection.



In addition to the mechanical cleaning of different kinds of pipelines, **RHC SA** is 100% autonomous when it comes to the design and approx. 95% autonomous when it comes to the fabrication of their **Mechanical Cleaning Tools (MCT)**.

With several 4 and 5 axis drilling and milling machines, **RHC SA** is able to push the internal R&D and to construct different cleaning tool designs to comply with client requirements and lead time.

RHC SA operates worldwide and has experience in working in Australia, Europe, Russia, South and North America as well as Middle East.

RHC SA adapts itself to the particular condition of the project and aims for a close relationship and short communication channel in order to maximize the effectiveness of the project and by the same time reducing the costs.



Reinhart Cleaning Technology

Adapted Cleaning Forces

RHC SA with its **RCT** provides adapted cleaning forces regarding:

- Pipeline geometry
- Flow specifications
- Scale nature

Integrated Bypass

Since 1952 **RHC SA** uses bypass in its **RCT** to clean pipelines.

The bypass creates continuous flow across the tool and flushes removed deposits in front of the cleaning tool.

Progressive Cleaning Tool Design

RCT was developed and fine-tuned over the years with several tool designs for progressive dewaxing or descaling cleaning operations.

Efficient Cleaning Technology

RCT maximises the effectiveness of each cleaning run with a tailored cleaning solution.

RCT vs. Pigging

No Standard Tool Type Catalog

Customized tools according to pipe specifications:

- Deposit, cleaning medium, flow, etc.
- Pipe geometry (internal \varnothing 's, bends, etc.)

No Standard Sizes

- Optimized cleaning forces to internal pipe \varnothing
- Adapted propulsion to internal pipe \varnothing
- Optimized tool length to pipe specification

No Static Cleaning

- Dynamic cleaning with optimized bypass
- Flush effect is a standard in **RCT**
- Deposit floating in front of the tool

Cost Saving Solution

RCT effectiveness is a long term cost saving solution:

- Effective cleaning tools
- Less cleaning runs
- Shorter cleaning schedule
- Less operational costs