TRUECAN
INDUSTRIAL TECHNOLOGIES INC.

INDUSTRIAL CIRCULARITY

Recover more. Replace less.

Magnetic separation for recovery, asset protection and uptime

Paul Heynen | TrueCan Industrial Technologies Inc.

Recycling Council of Alberta Conference | Fairmont Chateau Lake Louise

Thank you to Jennifer Koole, Recycle AB and Fairmont Chateau Lake Louise.



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CIRCULARITY IS BIGGER THAN RECYCLING.

The **R-Ladder** keeps resources at their highest value for longer.



Reduce
Use fewer materials and consumables.

Repair
Restore function and keep assets in service.

Refurbish
Extend life through upgrade and renewal.

Reuse
Keep components and systems in circulation.

Recycle
Recover materials when no longer usable.

For industry, circularity also means **fewer failures, fewer consumables and longer asset life.**

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WHO WE HELP

Operators with critical fluid systems where contamination drives cost, waste and downtime.



PIPELINES & TERMINALS



PROCESSING PLANTS



REFINERIES



DRILLING & PRODUCTION



POWER & UTILITIES

PUMPS • VALVES • SEALS • BEARINGS • HEAT EXCHANGERS • FILTERS • PROCESS FLUIDS

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Recycling is also efficiency and uptime.

Asset protection reduces waste before it is created.



Longer asset life

Pumps, seals, valves and heat exchangers last longer when abrasive fines are removed.

Fewer consumables

Less filter waste, less oil loss, fewer replacement parts.

Less downtime

Cleaner systems mean fewer contamination-related shutdowns and interruptions.

Using what we already have more efficiently is also sustainability.

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ASSET PROTECTION = LESS WASTE.

Compressor lube-oil case: fewer shutdowns, lower OPEX, longer component life.

15–20
emergency shutdowns/year
Before magnetic separation

0
filter-related shutdowns
Reported after installation

$115K → $25K
Annual filter OPEX

2×
Oil-change interval extended

3×+
Mechanical seal life extended

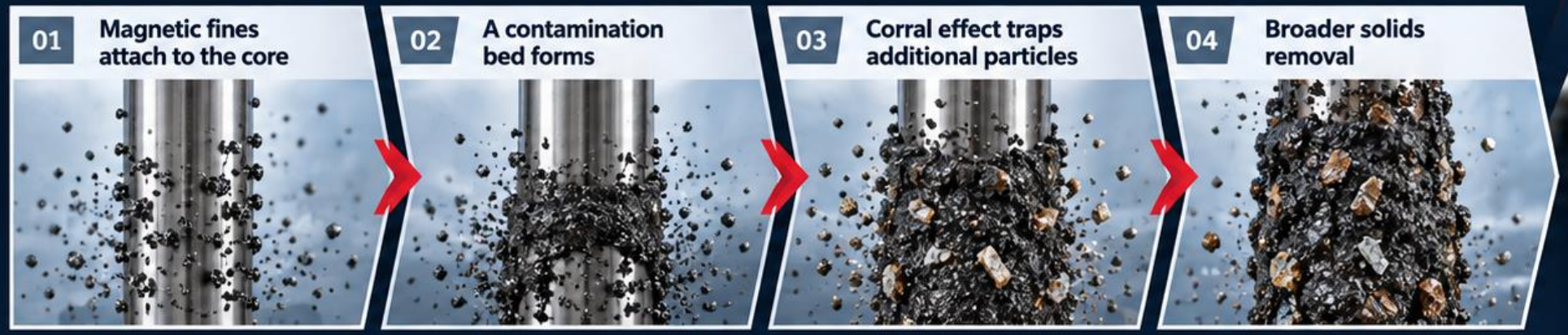


Fewer filters, less oil waste, fewer replacement parts — this is recycling through efficiency.

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How magnetics captures more than ferrous

A magnetic core can help remove a broader contamination load.

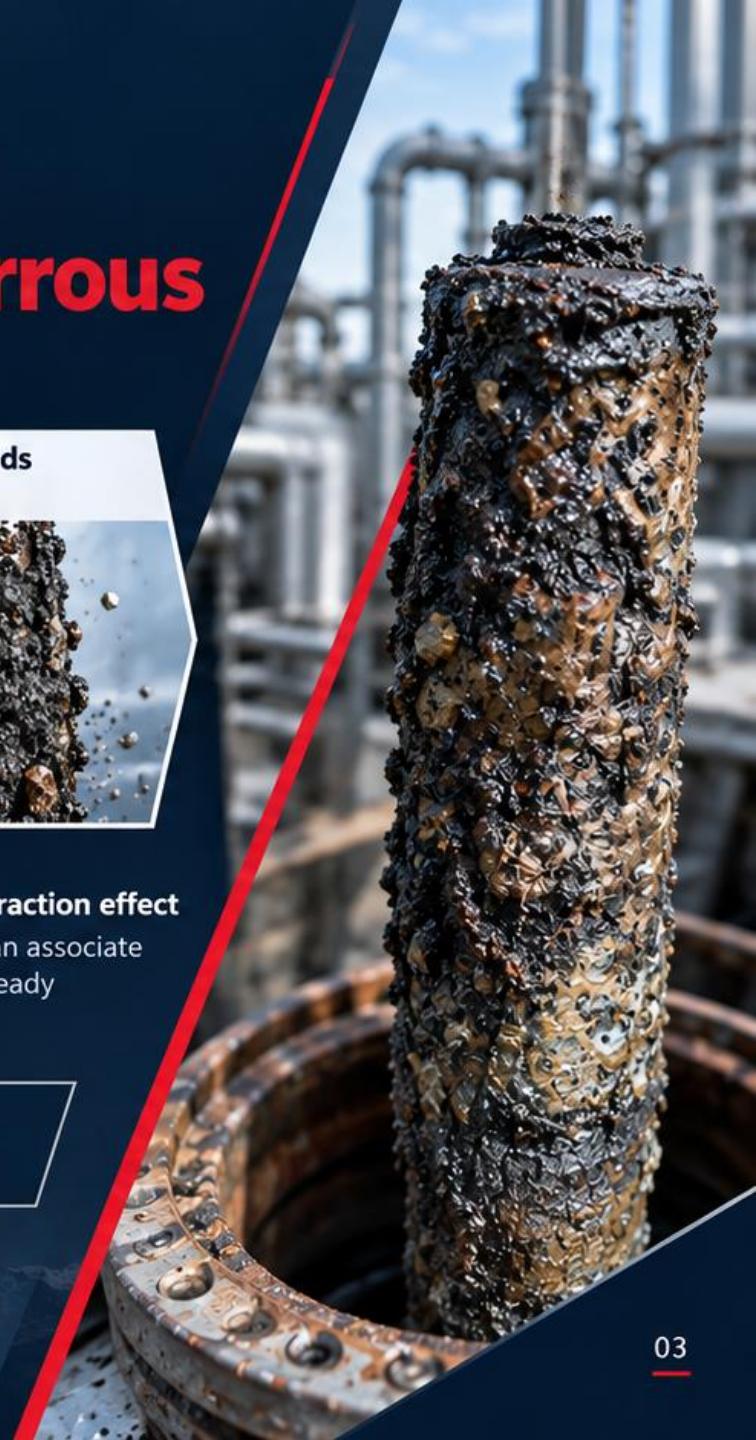


Magnetic attraction
Ferrous and magnetically responsive fines attach first.

Corral effect
Non-ferrous particles can become physically trapped in the captured matrix.

Static / surface-attraction effect
Very fine particles can associate with the material already being captured.

Documented glycol case: 74% non-ferrous / 26% ferrous captured



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12,000-BARREL SLOP TANK RECOVERY

From disposal liability to refinable crude oil.

- **12,000 BBL** crude-oil slop tank
- **1 lb** black powder per barrel
- **87%** of particles below 4 µm
- **70%** below 1 µm
- **5,000 ppm → 1,200 ppm**
- **76%** contamination reduction



Result: refinable crude oil, full barrel resale value, disposal liability eliminated.

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Before we call it waste, ask one more question:

Is there still value here that we can protect or recover?

> *"Sometimes the most sustainable barrel of oil isn't the next barrel we produce. It's the barrel we already had — and figured out how to use again."*

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