



Safer • Smarter • Solutions

~~EXKAL~~

EXKAL-XPC CALCIUM NAPHTHENATE DISSOLVER



DISSOLVING THE CHALLENGE OF CALCIUM NAPHTHENATE IN 6-12 HOURS: EXKAL-XPC IS THE WORLD'S FIRST CALCIUM NAPHTHENATE DISSOLVER

THE PROBLEM:

Oil and gas operators in areas such as West Africa, the North Sea and the Americas are more frequently recognising complex Calcium Naphthenate (CaN) deposits as a major flow assurance issue which can persist late into the life of a field development.

Until now, there has been no chemical capable of efficiently dissolving oilfield CaN deposits.

The CaN challenge derives from the complex mix of compounds found in crude oil. Some of these, such as Naphthenic acids, can cause problems during hydrocarbon production and processing operations. Naphthenic acids can precipitate as a solid when crude oil mixes with calcium-rich produced water to form solid CaN. Its density lies between that of water and crude oil and therefore is likely to accumulate in large volumes at the oil/water interface in separators, causing blockages.

CaN deposits form very quickly in vessels, pipework and equipment associated with oil production operations severely limiting production by forming significant amounts of insoluble, sticky material.

Remedial work to allow operations to be reinstated has typically involved manual removal, which can be extremely hazardous, involving confined space entry risks. In addition, this time consuming process can result in lost production time which can run into millions of pounds.

THE SOLUTION:

To solve this issue, EnerMech in partnership with chemical decontamination experts Exkal, has developed EXKAL-XPC solution, the first dissolver to offer operators a more cost effective, efficient, safe and environmentally responsible way of dealing with CaN deposits.

EXKAL-XPC is a patented formulation containing a synergistic blend of organic solvents and carboxylic acids which can solubilise CaN and tolerate the presence of a significant volume of water that may be associated with the deposits.

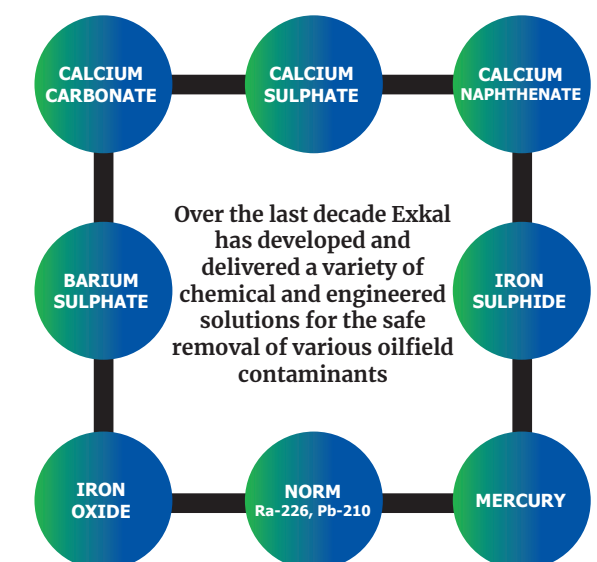
The benefits of using EXKAL-XPC include:

1. A one-stage simple soak procedure, it can dissolve massive quantities of CaN deposits in 6-12 hours under static conditions and at ambient temperature.
2. It negates the need for additional personnel to be on board the vessel to carry out the physically demanding manual remediation, reducing costs and confined space entry risks in a hazardous environment
3. It returns Naphthenate to its liquid Naphthenic acid form by removing the calcium ion bound to each CaN molecule. The solution containing the dissolved Naphthenic acid, organic solvents, organic acid and Calcium Carboxylate is then safely pumped out of the system leaving it clean and totally CaN free.

THE RESULT:

"Having waited many years for this, I can now say that EXKAL-XPC is the first ground-breaking, cost-effective Calcium Naphthenate dissolver available for this type of oil production system foulant removal. This Naphthenate dissolver is fast acting, is ready for onshore or offshore use and ticks all the required boxes for saving significant downtime in process clean-up, with an immediate return to normal production, without any detrimental impacts."

Colin Smith
Production Chemistry Consultant
Naphthenate Specialist



EXKAL-XPC

A NEW, GAME-CHANGING CHEMICAL CAPABLE OF RAPIDLY DISSOLVING CALCIUM NAPHTHENATE SOLIDS IN A MATTER OF HOURS.



Increases worker safety by eliminating confined space entry risks associated with manual removal



Fast acting solution for in-situ removal, turning weeks in to hours



Capable of dissolving large quantities of Calcium Naphthenate deposits with a simple soak procedure



Reduced waste and environmental impact from waste disposal and incineration





**Contact Andy Brailsford
on abrailsford@exkal.co.uk**

Africa

**Cape Town, South Africa
(Regional Headquarters)**
26D Paarden Eiland Road, Paarden Eiland,
Cape Town, 7405, South Africa

Asia

**Singapore
(Regional Headquarters)**
1 Gateway Drive #17-16,
Westgate Tower, Singapore, 608531

Americas

**Houston, Texas, USA
(Regional Headquarters)**
14000 West Road, Houston,
Texas, 77041

Australia

**Perth, Australia
(Regional Headquarters)**
931 Cockburn Road, Henderson,
Perth, WA 6166

Europe

**Aberdeen, UK
(International Headquarters)**
EnerMech House, Howes Road,
Aberdeen, AB16 7AG

Middle East & Caspian

**Abu Dhabi, UAE
(Regional Headquarters)**
Plot 36 & 37, ICAD 1, Mussafah,
Abu Dhabi, UAE, PO Box 8546