



**CLEAN OIL  
BRIGHT IDEAS**

# Transformer Oil Rimakot Tap Changer

## CJC™ Application Study

**Application Study  
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### CUSTOMER

Transformer situated at **Rimakot** in Iceland  
Owner: Rafmagnsveitur Ríkisins RARIK

### THE SYSTEM

Tap changer on a 30 MVA transformer, supplying electricity to the island of Vestmannaeyjar (Westmen Isles.)

**Oil type:** Transformer oil  
**Oil volume:** Approx. 120 L

### THE PROBLEM

Every time the tap changer switches position, particles are created by sparks, that burn and oxidize the oil. The particles cause wear on the moving parts of the tap changer, and they may block for switching or destroy the contact areas, when they adhere.

### THE SOLUTION

**CJC™ Fine Filter HDU 15/25 PV**, capacity 45 L per hour, using a **CJC™ Filter Insert BGK 15/25**.

### FINANCIAL BENEFITS

The benefits are mainly characterised as trouble free operation and less wear, which in turn lead to less frequent unit overhauls and generally reduced maintenance costs.

### ENVIRONMENTAL BENEFITS

Increased oil life time.

### THE TEST

The CJC™ Filter was installed and a sample was taken. One week later the next sample was taken. Afterwards, samples were taken with varying intervals to monitor the cleanliness of the oil.

### THE RESULT

The test results show that the filter does an excellent job in cleaning the oil. The test also proved that when oxidation residues are present, it is necessary to use oil sampling and trend analyses to predict filter insert change. It is not sufficient to rely only on the pressure drop over the filter as an indication of when to change the filter insert.  
In the present case, filter insert replacement was required every 7-9 months.



### OIL SAMPLE



### THE RESULT

Sample Date	20.03.2002	27.03.2002	14.05.2002
> 2 µm	not countable	288,610	142,395
> 5 µm	not countable	75,266	70,516
> 15 µm	not countable	5,517	19,522
ISO 4406	23/20/17	19/17/13	18/17/15

Particles per 100 ml

