

## ANALISIS FURAN PADA TRANSFORMATOR DENGAN METODE KROMATOGRAFI CAIRAN KINERJA TINGGI

| Klien/Proyek      | : Graha Cempaka<br>Mas/Apartemnt | Tegangan            | : 20000 Va                   |
|-------------------|----------------------------------|---------------------|------------------------------|
| Pabrikan/Tahun    | : Trafindo/1994                  | Kapasitas<br>Minyak | : 1100 L                     |
| Nomor Seri        | : 123456789                      | Catatan             | :                            |
| Rated Power       | : 2000 kva                       |                     |                              |
|                   |                                  |                     | Hasil Uji                    |
|                   |                                  | (Nilai Konsetras    | i Dalam Parts Billion [ppb]) |
|                   | 1                                | -                   |                              |
|                   | Tanggal Sampling                 |                     |                              |
| Parameter         | 6/6/2023                         | -                   | BATAS TRANSFORMER 2FAL       |
|                   | Tanggal Terima                   |                     | STANDARD FIST-3-31:2003      |
|                   | 6/6/2023                         | -                   | STANDARD F1S1-3-31.2003      |
|                   | Tanggal Pengujian                |                     |                              |
|                   | 6/6/2023                         | _                   |                              |
| 5HMF              |                                  |                     |                              |
| (5-hydromethyl-2- | 0                                | 0                   |                              |
| furakhydel)       |                                  |                     |                              |
| 5HMF              |                                  |                     | 0-292 pbd Normal Aging Rate  |
| (5-hydromethyl-2- | 1                                | 1                   |                              |
| furakhydel)       |                                  |                     | 0-292 pbd Normal Aging Rate  |
| 5HMF              |                                  |                     |                              |
| (5-hydromethyl-2- | 1                                | 1                   | 0-292 pbd Normal Aging Rate  |
| furakhydel)       |                                  |                     |                              |
| 5HMF              |                                  |                     | 0-292 pbd Normal Aging Rate  |
| (5-hydromethyl-2- | 1                                | 1                   |                              |
| furakhydel)       |                                  |                     | 0-292 pbd Normal Aging Rate  |
| 5HMF              |                                  |                     |                              |
| (5-hydromethyl-2- | 1                                | 1                   |                              |
| furakhydel)       | 0.474                            |                     |                              |
| Total 2FAL        | 0/5* = 0.0                       | -                   | 5* Faktor Koreksi            |
| Total Furan       | 1                                | -                   | •                            |
| Estimate DP       | 1                                | -                   | -                            |

- Berdasarkan hasil uji sample tersebut maka trafo mengalami Normal Aging Rate
- Berdasarkan hasil uji sample tersebut maka trafo mengalami Normal Aging Rate
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Tangerang, 16 juni 2023

| Diuji Oleh :                            | Diperiksa<br>Oleh :              | Disetujui Oleh :                            |
|---|----------------------------------|---|
| Resita Nur Ambya<br>Analis Laboratorium | Ahmad Khari<br>KaBag In<br>House | isAhmad Sujarwo<br>Manager In House Service |



#### TEST RESULT OF OIL ANALYSIS

No. Documen: Tgl/Rev. Form: Tgl/Rev. Isi Dok: Halaman:

Customer: Edo Laksana Widodo

**Project: Hotel/Apartment** 

### DATA TEKNIS TRANSFORMATOR

 $\textbf{Tegangan} \begin{array}{l} :138000\,/\\ 3450\;V \end{array}$ **Tahun**: 1999 Catatan Merk : Brush

: 50-EE-Vector: Dyn-Tag No. **Kapasistas** : 5000 Kva 2112A Group 1

**Jumlah** : 2156 No Seri : 7171771**Temp. Oil** : -5\* Oil L

### HASIL PENGUJIAN OIL ANALYSIS

| STANDAR QUAL<br>ANALYS                  | ITY OF OIL<br>SIS | 'METHOD       | 1<br>1     | 2<br>1<br>1<br>1<br>1 | 3<br>1<br>1<br>1<br>1<br>1 |             | SAN NILAI |      |            |
|---|-------------------|---------------|------------|-----------------------|----------------------------|-------------|-----------|------|------------|
|   | 4 C/TD 5          | 4 GTD 5       | 08/08/2023 | -                     | -                          | Poor        | Pair      | G000 | dConditior |
| Color / Appereance                      | ASTM<br>Color     | ASTM<br>D1500 | 5          | -                     | -                          | >3.5        | -         | 3.5  | Poor       |
| Breakdown Voltage (Dielectric Strength) | TEST              | TEST          | TEST       | TEST                  | TEST                       | TEST        | TEST      | TEST | ΓΤΕSΤ      |
| Interfacial Tension                     |                   | TEST          | TEST       | TEST                  | TEST                       | TEST        | TEST      | TEST | ΓΤΕSΤ      |
| Total Acid Number (TAN)                 | TEST              | TEST          | TEST       | TEST                  | TEST                       | TEST        | TEST      | TEST | ГТЕЅТ      |
| Water Content                           | TEST              | TEST          | TEST       | TEST                  | TEST                       | TEST        | TEST      | TEST | ΓΤΕSΤ      |
| Oil Quality Index (OQIN)                | TEST              | TEST          | TEST       | TEST                  | TEST                       | TEST        | TEST      | TEST | ГТЕЅТ      |
| Sediment & Sludge                       | TEST              | TEST          | TEST       | <b>TEST</b>           | TEST                       | <b>TEST</b> | TEST      | TEST | ΓTEST      |
| Density                                 | TEST              | TEST          | TEST       | <b>TEST</b>           | TEST                       | TEST        | TEST      | TEST | ΓTEST      |
| Corrosive Sulfur                        | TEST              | TEST          | TEST       | TEST                  | TEST                       | TEST        | TEST      | TEST | ΓTEST      |
| Flash Point                             | TEST              | TEST          | TEST       | TEST                  | TEST                       | TEST        | TEST      | TEST | ΓTEST      |

**Kesimpulan:** 

Berasarkan IEC 60422:2013, Sample Minyak Trafo berada pada kondisi Poor

Rekomendasi:

Lakukan Purifikasi Oli atau pergantian Oli

Tangerang, 09 August 2023

| Di uji Oleh,          | Di Periksa Oleh,          | Di Setujui Oleh,           |  |  |  |
|-----------------------|---------------------------|----------------------------|--|--|--|
| Farhan Aditya         | Ahmad Kharis              | Ahmad Sujarwo              |  |  |  |
| (Analis Laboratorium) | (kaBag. In House Service) | (Manager In House Service) |  |  |  |

# Page 3