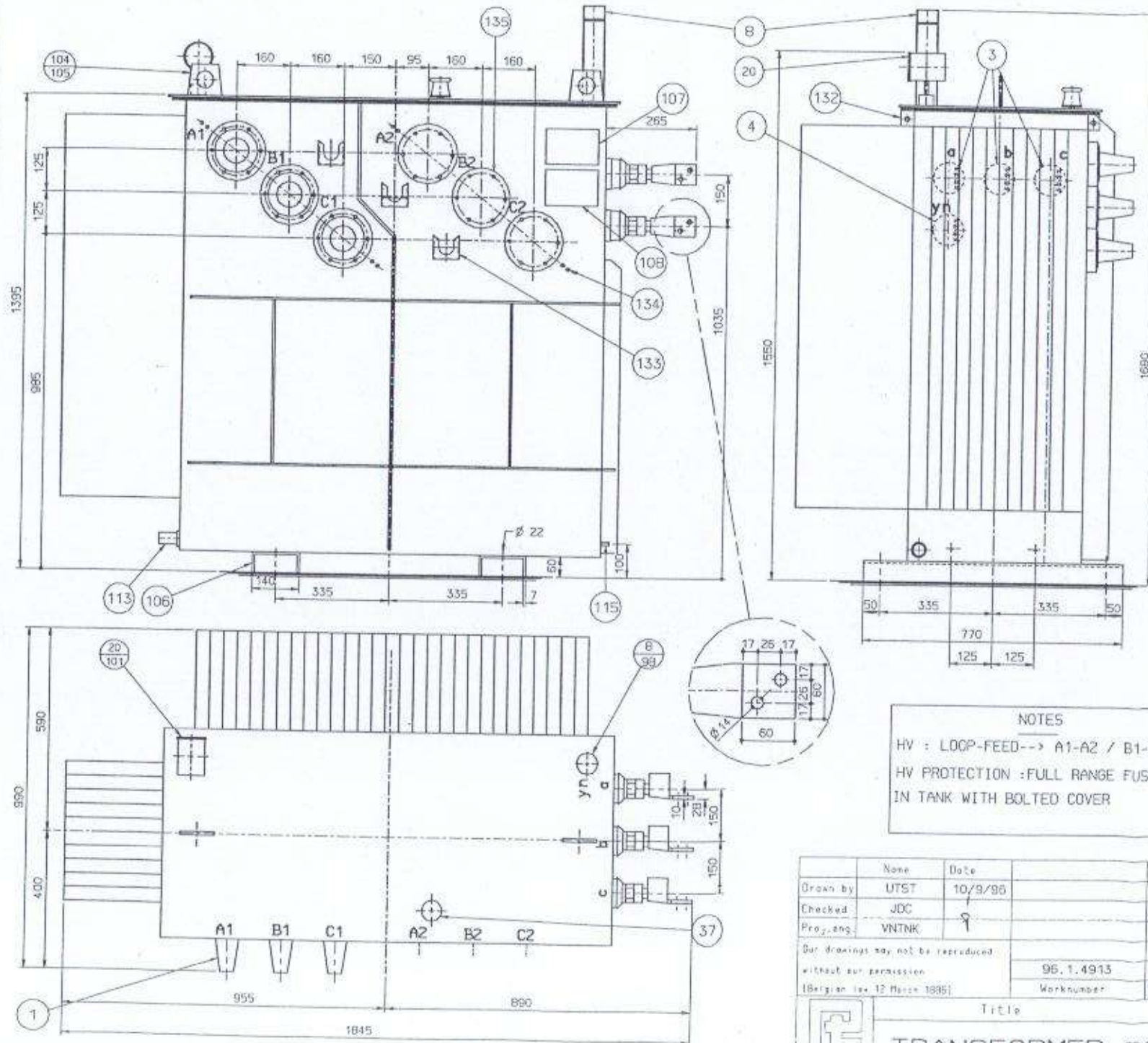


- 1 HV BUSHINGS : ELASTIMOLD
TYPE M 400 AR-3/J
- 400 SERIES-630 A-36 kV
- 3 LV BUSHING : DIN 1/1000 A
- 4 LV NEUTRAL : DIN 1/1000 A
- 8 OIL LEVEL INDICATOR : MAGNETIC
- 20 THERMOMETER : 2 x NO CT
- 37 OFF-CIRCUIT TAP-CHANGER
- 98 FILLING HOLE
- 101 THERMOMETER POCKET
- 104 LIFTING LUGS ACTIVE PART
- 105 LIFTING LUGS COMPLETE PART
- 106 SKID
- 107 RATING PLATE
- 108 TERMINAL MARKING PLATE
- 113 REST DRAIN VALVE A22
- 115 STUDS M10 x 25 FOR EARTH BAR
- 132 SECURING LUGS FOR TRANSPORT
- 133 PARKING STANDS 160 PS
- 134 FIXING POINTS FOR
ANTI-TAMPER BRACKETS

WEIGHTS	
OIL	: 665 kg
TOTAL	: 2530 kg
HV : 20.000 V	
LV : 660 V	
Dyn11	

NOTES
 HV : LOOP-FEED--> A1-A2 / B1-B2 / C1-C2
 HV PROTECTION : FULL RANGE FUSES
 IN TANK WITH BOLTED COVER

Name	Date				
Drawn by	UTST	10/9/96		3	
Checked	JDC			2	
Proj. eng	VNTNK			1	
Our drawings may not be reproduced without our permission (Belgian law 12 March 1986)			96.1.4910-4912	3x800	CELTIC CONTRACTING
			Marknumber	Quantity	Scale ISO Symb.
					1/10



- 1 HV BUSHINGS : ELASTIMOLD TYPE M 400 AR-3/J 400 SERIES-630 A-36 kV
- 3 LV BUSHING : DIN 1/1000 A
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- 115 STUDS M10 x 25 FOR EARTH BAR
- 132 SECURING LUGS FOR TRANSPORT
- 133 PARKING STANDS 160 PS
- 134 FIXING POINTS FOR ANTI-TAMPER BRACKETS
- 135 BLIND FLANGE PROVISION FOR LATER LOOP-FEED

WEIGHTS	
OIL	: 665 kg
TOTAL	: 2530 kg
HV : 20.000 V	
LV : 660 V	
Dyn11	

NOTES
 HV : LOOP-FEED--> A1-A2 / B1-B2 / C1-C2
 HV PROTECTION : FULL RANGE FUSES
 IN TANK WITH BOLTED COVER

None	Date			3
Drawn by	UTST	10/9/96		2
Checked	JDC			1
Proj. eng.	VNTNK			
Our drawings may not be reproduced without our permission (Belgian law 12 March 1835)				
96.1.4913		1x600	Celtic Contracting	Scale 1/10
Worknumber		Quantity		
Title			Customer	Name
TRANSFORMER 800 kVA			CELTIC CONTRACTING	Date
Drawing Nr.			Scale	150 Symb.
			1/10	



NYNAS TRANSFORMER OIL - NYTRO 10GBN

PROPERTY	UNIT	TEST METHOD	GUARANTEED DATA		TYPICAL DATA
			Min	Max	
1. Physical					
Appearance		IEC 296	Clear, free from sediment		
Density, +20°C	kg/dm ³	BS 4714	0,895		0,885
Viscosity, +40°C	mm ² /s	BS 2000.71	11,0		9
Viscosity, -30°C	mm ² /s	BS 2000.71	1800		1100
Flash Point, PM	°C	BS 2000.34	140		146
Pour Point	°C	BS 2000.15	-45		-57
2. Chemical					
Neutralization value	mg KOH/g	BS 2000.1	0,03		<0,01
Corrosive sulphur		BS 5680	non-corrosive		
Aromatic content	%	IEC 590			14
Antioxidant, phenols	Wt %	BS 5984	not detectable		
Water content	mg/kg	IEC 733	30		<20
3. Electrical					
Dielectric dissipation factor at 90°C		BS 5737	0,005		<0,001
Interfacial tension	mN/m	ISO 6295	40		44
Breakdown voltage					
- Before treatment	kV	BS 5874	30		40-60
- After treatment	kV	BS 5874	70		>70
4. Oxidation Stability					
At 100°C 164h		IEC 1125 A (IEC 74)			
Neutralization value	mg KOH/g		0,40		0,10
Sludge	Wt %		0,10		0,03
At 120°C 164h		BS 148.84			
Total acidity	mg KOH/g		1,5		0,24
Sludge	Wt %		1,0		0,04
5. Gassing tendency					
Hydrogen	mm ³ / min	IEC 628 (A)	+5		<+5

NYTRO 10GBN is an uninhibited transformer oil, meeting the specifications IEC 296(82), Class I and II, ASTM D3487 type I and BS 148 Class I and II.

SAFETY DATA SHEET

NYTRO 10GBN

Product:	NYTRO 10GBN	Released:	1994.10.04
Type of product:	INSULATING OIL	Contact person:	Technical Service
Manufacturer/		Department:	Research & Development
Supplier:	NYNAS NAPHTHENICS AB	Telephone:	+46 8 520 65000
Address:		Telefax:	+46 8 520 20743
Postal address:	S-149 82 NYNÄSHAMN SWEDEN		

COMPOSITION

Ingredients	Conc.	TLV	Rem.
A. Ingredients contributing to the hazard:			
B. Other substances:			
Severely hydrotreated naphthenic oil distillate. CAS-nr:64742-53-6	100%	X	Oilmist, mineral
Or			
Severly hydroxyreated naphthenic oil distillate. CAS-nr:64742-53-6	80-100%	X	Oilmist, mineral
Severely hydrotreated naphthenic oil distillate. CAS-nr:64742-52-5	0-20%	X	Oilmist,

HAZARDS IDENTIFICATION

FIRST AID MEASURES

Inhalation: Fresh air.

Skin contact: Remove contaminated clothing. Wash skin with soap and water.

Eye contact: Rinse with plenty of water.

Ingestion: Rinse mouth and give water to drink. Obtain medical advice if a larger amount has been swallowed.

FIRE FIGHTING MEASURES

Extinguishing media: Carbon dioxide, dry chemical or foam.

ACCIDENTAL RELEASE MEASURES

Prevent spills from entering drains, sewers, water courses or soil. Contain leaking liquid with sand, earth or other suitable material and collect. Advise fire brigade.

Dispose in accordance with national and local regulations.

HANDLING AND STORAGE

If vapour or mist is released it is necessary with a well ventilated workplace. Mechanical ventilation and local exhaust might be necessary.

EXPOSURE CONTROLS/PERSONAL PROTECTION

Handle in accordance with good industrial hygiene and safety practices. Wear protective gloves and clothing if there is a risk of repeated skin contact. Wear safety goggles if splashes are possible.

PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light yellow, low viscous liquid
Boiling point:	> 250 °C
Melting point:	-60 °C
Flash point PM:	> 140 °C
Ignition point:	> 250 °C
Density:	888 kg/m ³
Soluble in organic liquids:	Yes
Soluble in water:	No

STABILITY AND REACTIVITY

Emits flammable vapours when heated.

TOXICOLOGICAL INFORMATION

Inhalation:	Prolonged and repeated inhalation of mist or vapour generated at elevated temperatures may irritate respiratory tract.
Skin contact:	Prolonged or repeated exposure may lead to defatting of the skin and subsequent dermatitis. May cause oil acne.
Eye contact:	May cause redness and transient pain.
Ingestion:	May cause nausea and eventually vomiting and diarrhoea.

ECOLOGICAL INFORMATION

Mobility: Water solubility < 1 mg/l

Persistence and degradability: Not expected to be readily biodegradable, data lacking.

Bioaccumulative potential: Components have calculated (CLOGP) log Pow values > 6. No long-term adverse effects expected due to product insolubility in water.

Aquatic toxicity: Not expected, data lacking.

DISPOSAL CONSIDERATION

Residue of oil is considered as hazardous waste. This includes the emballage. Dispose in accordance with national and local regulation.

TRANSPORT INFORMATION

The Product is NOT classified as dangerous goods.

REGULATORY INFORMATION

Symboles:

Hazards identification:

Handling & storage: S 60 This material and its emballage should be regarded as hazardous waste.

OTHER INFORMATION

Acute oral toxicity LD50: > 5 000 mg/kg (rats).

According to IARC Monograph vol 33. Noncarcinogenic to experimental animals.

According to Concawe guidance, report 87/62: EEC-category for carcinogenic substances: "Non-labelling" category.
