



NEW SURPLUS HYUNDAI HEAVY INDUSTRIES 80 / 106.4 / 132.8 MVA GENERATOR STEP-UP (GSU) POWER TRANSFORMER

72 kV Grounded-Wye – 13.8 kV Delta • YNd1 • 3-Phase • 60 Hz • ONAN/ONAF/ONAF • HV On-Load Tap Changer, 21 Positions • CSA / IEEE • Copper Windings • Manufactured December 2015 • Never Placed in Service

EQUIPMENT OFFERING • ITEM STT-06-0034

Item No.	STT-06-0034
Manufacturer	Hyundai Heavy Industries Co., Ltd., Ulsan, Republic of Korea
Serial / Design No.	20141844TLB001 / TM 1159
Manufactured	December 2015 (nameplate)
Type	Generator step-up power transformer, two-winding, three-phase, oil-immersed, outdoor, conservator type, copper windings
Rating	80 / 106.4 / 132.8 MVA — ONAN / ONAF / ONAF
Temperature rise	65 °C top oil / 65 °C average winding
High voltage	72,000 V grounded-wye, neutral brought out (H0) — 350 kV BIL; HV neutral 110 kV BIL
Low voltage	13,800 V delta — 110 kV BIL
Vector group	YNd1
Tap changer	HV on-load tap changer (LTC), 21 positions, 79,200 – 64,800 V (72,000 V ± 10 %, 720 V steps)
Impedance (85 °C)	13.947 % at 132.8 MVA base, nominal tap (≈ 8.40 % at 80 MVA base, calculated)
Standards	CSA / IEEE
Condition	New surplus — never placed in service; reported never energized (seller records)
Location	Storage yard, Alberta, Canada — inspection by appointment
Delivery term	EXW point of storage, Alberta (Incoterms® 2020) — as is, where is
Availability	Available — subject to prior sale
Price	On application (U.S. dollars)

DETAILED TECHNICAL DATA (FROM MANUFACTURER'S NAMEPLATE UNLESS NOTED)

Rated power	80 MVA ONAN / 106.4 MVA ONAF (1st stage) / 132.8 MVA ONAF (2nd stage)
Phases / frequency	3 / 60 Hz

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Rated currents, HV (nominal tap 11)	642 A / 853 A / 1,065 A at 80 / 106.4 / 132.8 MVA
Rated currents, LV	3,347 A / 4,451 A / 5,556 A at 80 / 106.4 / 132.8 MVA
LTC range	Position 1 = 79,200 V ... position 11 (11A/11B/11C) = 72,000 V ... position 21 = 64,800 V; position 15 = 69,120 V. Change-over selector at mid-range.
Insulation levels (BIL)	HV 350 kV / HV neutral 110 kV / LV 110 kV
Positive-sequence impedance, HV–LV, 85 °C, 132.8 MVA base	Tap 1: 14.731 % • Tap 11: 13.947 % • Tap 21: 13.384 %
Zero-sequence impedance, HV–LV, 85 °C, 132.8 MVA base	Tap 1: 14.324 % • Tap 11: 13.540 % • Tap 21: 13.006 %
Winding material	Copper
Operating altitude	Up to 3,300 ft
Sound level	71.3 dBA at maximum MVA
Insulating fluid	Mineral oil, ASTM D3487 Type II (inhibited). Nameplate volume at 20 °C: 35,521 L tank & fittings + 2,882 L radiators = 38,403 L ($\approx$ 10,145 US gal); 76,192 lb. PCB-free at manufacture (< 1 ppm).
Tank design	Tank, conservator and radiators designed for full vacuum; maximum operating positive pressure at tank cover 10 psi
Approximate weights (nameplate)	Total, fully assembled 276,500 lb • Untanking 147,255 lb • Shipping (without oil) 182,500 lb • Oil 76,192 lb
Dimensions	Per manufacturer's outline drawing — provided with the data package; to be confirmed for transport planning

Current transformers (nameplate) — thermal rating factor 1.33 for all CTs

CT No.	Location / function	Ratio (multi-ratio taps)	Accuracy	Burden
1 – 3	HV bushings (1 per phase)	200 / 300 / 800 / 1200 : 5	0.3B-1.8 at 1200:5	45 VA
4 – 9	HV bushings (2 per phase)	200 / 300 / 800 / 1200 : 5	C800 at 1200:5 *	200 VA
10	HV neutral bushing	200 / 300 / 800 / 1200 : 5	C400 at 1200:5	100 VA
11 – 16	LV bushings (2 per phase)	2000 / 4400 / 5000 / 6000 : 5	C400 at 6000:5	100 VA
17	Auxiliary (single ratio)	1420 : 2	1.2CL	12.5 VA
18 – 19	Auxiliary (single ratio)	6700 : 2	1.2CL	12.5 VA

* Accuracy class for CTs 4–9 is partially illegible in the available nameplate photograph; to be confirmed against the nameplate drawing. Auxiliary CT functions (winding-temperature / regulator) to be confirmed from the schematic.

SCOPE OF SUPPLY

Assembled main tank with core and coil assembly and on-load tap changer, together with the following components stored loose and crated as identified in the seller's inventory (final itemized list to be attached to the quotation):

- Radiators and radiator banks with top and bottom header piping and radiator interlocks; cooling fans with supports
- Main conservator and OLTC conservator with breather piping, dehydrating breathers and supports
- HV, HV-neutral and LV bushings with bottom terminals; bushing tap adapters; additional crate of bushings supplied by the manufacturer
- HV surge arresters with supports; HV-neutral bus bars; post insulators
- OLTC motor drive unit with drive shaft, cover and supports; OLTC protective relay; OLTC pressure-relief piping
- Gas-detector (Buchholz) relay and piping; pressure-relief device and cover; online dissolved-gas monitor (GE Hydran M2)
- Interconnecting piping, cable holders and cable, ladder, anchor bolts and assembly hardware, re-assembly gaskets, touch-up primer, paint and thinner

Excluded unless expressly stated in the quotation: insulating oil for shipment (see Condition and Storage Record), site foundations, interconnecting bus/cable, protection and control panels, and any material not listed in the final itemized scope.

CONDITION AND STORAGE RECORD

- **Service history.** Manufactured December 2015; never placed in service. The unit is reported by the seller to have never been energized; CTG has not independently verified service history beyond the documents listed below.
- **Current storage.** Main tank stored outdoors on matting with temporary containment at a storage yard in Alberta, Canada; accessories stored separately in indoor and outdoor storage.
- **December 2024 preservation.** Receiving inspection and dew-point check ($-64.4\text{ }^{\circ}\text{C}$ under nitrogen; insulation moisture estimated $\approx 0.65\%$ by dry weight); vacuum leak-rate test passed; tank vacuum-filled with new inhibited ASTM D3487 Type II mineral oil to approximately 4 in. below the cover with a nitrogen blanket in the head space; OLTC compartment filled.
- **December 2024 diagnostic tests** (via shipping test bushings, by an independent testing firm): turns ratio at nominal tap within 0.14% of calculated; 5 kV winding insulation resistance and core/clamp ground insulation resistance acceptable; sweep-frequency response (SFRA) baseline recorded. Post-fill oil: moisture $< 4\text{ ppm}$; dielectric breakdown (ASTM D1816, 1 mm) 39 kV; dissipation factor 0.001% at $25\text{ }^{\circ}\text{C}$ / 0.029% at $100\text{ }^{\circ}\text{C}$; IFT 47 mN/m; acid number $< 0.01\text{ mg KOH/g}$; PCB not detected ($< 0.8\text{ mg/kg}$).
- **Not performed in 2024:** winding resistance, insulation power factor/capacitance, excitation current, bushing tests, dissolved-gas analysis, and functional testing of auxiliaries, cooling, controls and the OLTC.

- **Observations:** the 2024 report notes that the control cabinet requires cleaning (rodent nesting) and includes oil-sample comments. The complete preservation report, test sheets and laboratory reports are available to qualified buyers under NDA.
- **Pre-energization.** Because the unit has been in storage since manufacture, the buyer should plan a complete installation, oil-processing and commissioning program in accordance with the manufacturer's instruction book, preferably under manufacturer-authorized supervision. CTG can quote these services.

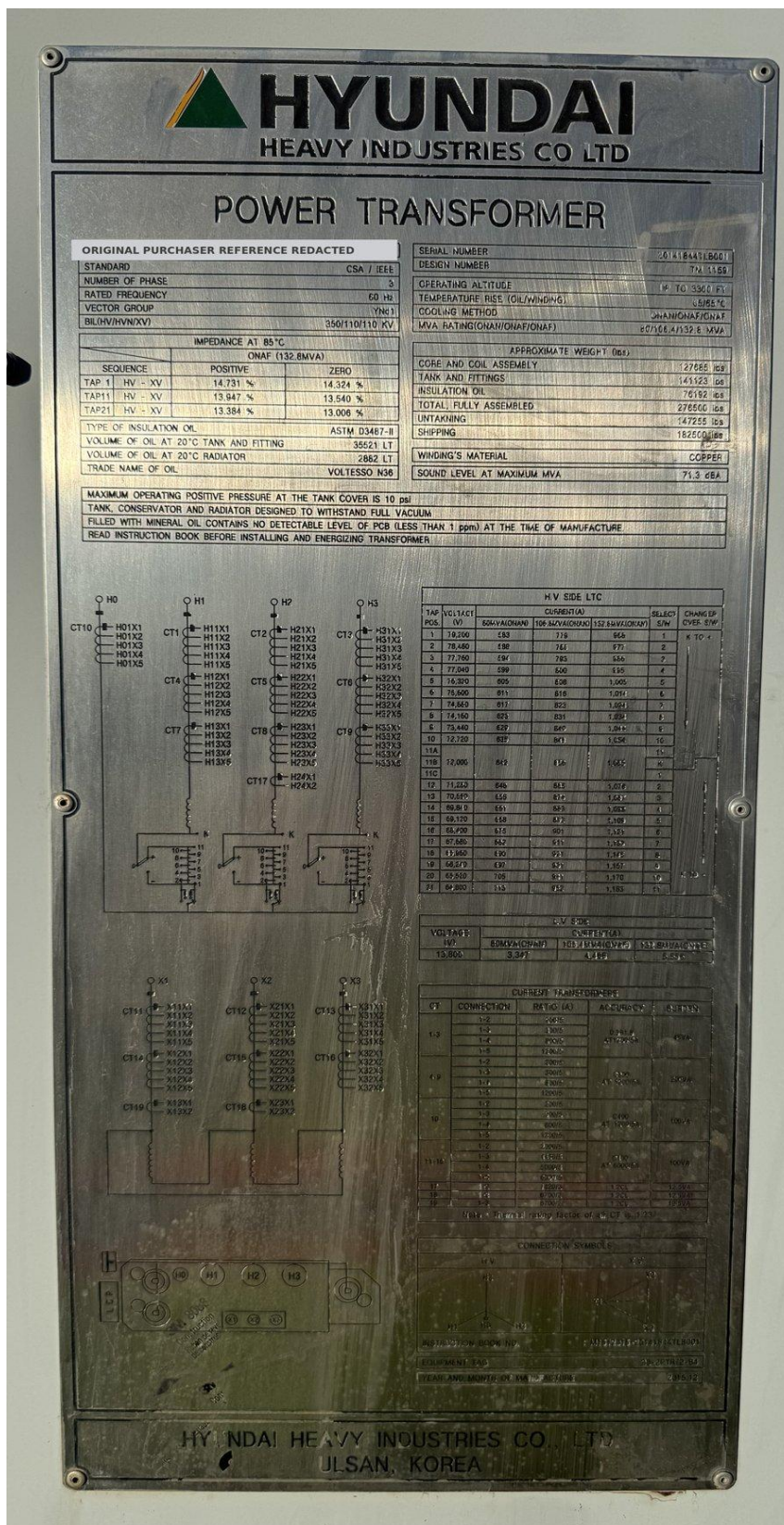
COMMERCIAL BASIS

- **Offeror.** CTG Power Systems Intl., LLC, on a sole-source, principal-to-principal basis directly to the ownership of the end-user project. No competitive tenders, brokers or intermediaries.
- **Price and payment.** Price on application, in U.S. dollars, by bank wire transfer or confirmed irrevocable letter of credit. Payment in full in cleared funds is required before release for pick-up unless otherwise stated in CTG's quotation. Credit cards are not accepted.
- **Delivery.** EXW point of storage, Alberta, Canada (Incoterms® 2020). Loading, oil draining and handling, rigging, permits, heavy haul or rail, Canadian export and U.S. or other import formalities are for the buyer's account unless quoted by CTG as options.
- **As is, where is.** Sold as is, where is, without manufacturer's warranty (expired) and without any warranty, express or implied, including merchantability or fitness for a particular purpose, except title as stated in the definitive sale agreement. Pre-purchase inspection by the buyer is encouraged.
- **Origin and import.** Country of origin: Republic of Korea. The unit is currently in Canada. Import duties, tariffs or other measures applicable at the destination, if any, are for the buyer's account and should be confirmed by the buyer's customs advisor at the time of purchase.
- **Optional services (quoted separately).** Oil drain and nitrogen/dry-air fill for transport, rigging and transport, customs brokerage, site assembly, oil supply and vacuum processing, testing, OLTC inspection and commissioning — at cost plus a stated margin.
- **Conditions.** Subject to prior sale, seller confirmation, CTG's counterparty screening (OFAC/BIS/EAR/FCPA/KYC) and CTG's General Terms and Conditions of Sale. Governing law Florida; venue Hillsborough County.

To request the data package (outline drawing, nameplate drawing, 2024 preservation and test report, itemized scope), an inspection appointment, or a formal quotation:

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Specifications are taken from the manufacturer's nameplate and from storage and test records supplied to CTG. They are believed accurate but are not warranted, and are superseded by the manufacturer's drawings and the definitive quotation. Weights and dimensions are approximate and must be verified before transport planning. This posting is an invitation to inquire and is not an offer capable of acceptance. Photographs show the actual unit as stored. This document supersedes CTG-OFR-2026-WEB-STT-06-0034-01 in its entirety.



Manufacturer's nameplate (original purchaser reference redacted by CTG).



Main tank as stored — oil-filled under nitrogen blanket; accessories stored separately.