DRY TYPE TRANSFORMERS UP TO 600 V PRIMARY

Part 1 General

1.1 SECTION INCLUDES

.1 Materials and components for dry type transformers up to 600 V primary, equipment identification and transformer installation.

1.2 RELATED SECTIONS

.1 Section 26 05 01 - Common Work Results - Electrical.

.2 The City of Winnipeg Standard Construction Specifications Section CW1110 – General Instructions.

1.3 REFERENCES

.1 Canadian Standards Association (CSA International)

.1 CSA C9-M1981(R2001), Dry-Type Transformers.

.2 CSA C802.2-06, Minimum Efficiency Values for Dry-Type Transformers

.2 National Electrical Manufacturers Association (NEMA)

1.4 PRODUCT DATA

.1 Submit product data in accordance with The City of Winnipeg Standard Construction Specifications Section CW1110 – General Instructions.

Part 2 Products

2.1 TRANSFORMERS

.1 Use transformers of one manufacturer throughout project and in accordance with CSA-C9.

.2 Transformers to meet or exceed minimum efficiency values as specified in CSA-C802.2.

.3 Design.

.1 Type: ANN.

.2 3 phase, 75 kVA, 600 V delta input, 120/208 V wye output, 60 Hz.

.3 Voltage taps: standard.

.4 Basic Impulse Level (BIL): standard.

.5 Hipot: standard.

.6 Sound level: 50 dB maximum

.7 Impedance at 17 degrees C: standard

.8 Enclosure: NEMA, removable metal front panel.

.9 Mounting: wall or floor

.10 Finish: in accordance with Section 26 05 01 - Common Work Results - Electrical.

.4 Voltage Taps

.1 Three phase units:

.1 Units rated to 15 kVA, 1 ± 5 % FCAN and 1 ± 5 % FCBN.

.2 Units rated greater than 15 kVA, 2 ± 2.5 % FCAN and 2 ± 2.5 % FCBN.

.2 Single phase units:

.1 2 ± 2.5 % FCAN and 2 ± 2.5 % FCBN.

.5 Windings

.1 High grade, non-aging grain oriented silicon steel with high magnetic permeability, and low hysteresis and eddy current losses. Maximum flux densities shall be substantially below the saturation point.

.2 Core volume shall allow for efficient transformer operation at 10% above the nominal voltage.

.3 Core lamination shall be tightly clamped and compressed.

.4 Coils shall be wound of electrical grade copper with continuous wound construction.

.5 The assembly shall be mounted on vibration absorbing pads.

.6 Enclosure

.1 Heavy duty ventilated NEMA type 1, Fabricated from sheet steel.

.2 Bolted removable panels for access to access separated primary and secondary terminals.

.3 Conductor entry: Knockouts.

.4 Designed for universal floor, wall mounting or trapeze hung.

.5 Indoor, ventilated, self cooled type. Temperature of exposed metal parts not to exceed 90 °C rise.

.6 Finish: in accordance with Section 26 05 01 - Common Work Results - Electrical.

2.2 EQUIPMENT IDENTIFICATION

.1 Provide equipment identification in accordance with Section 26 05 01 - Common Work Results - Electrical.

.2 Label size: 7.

.3 Nameplate wording: As per single line diagram label.

Part 3 Execution

3.1 INSTALLATION

.1 Mount dry type transformers up to 75 kVA as indicated.

.2 Mount dry type transformers above 75 kVA on floor.

.3 Ensure adequate clearance around transformer for ventilation.

.4 Install transformers in level upright position.

.5 Remove shipping supports only after transformer is installed and just before putting into service.

.6 Loosen isolation pad bolts until no compression is visible.

.7 Make primary and secondary connections in accordance with wiring diagram.

.8 Energize transformers after installation is complete.

END OF SECTION