

תשתיות אנרגיה בע"מ

טרמינל קריית חיים

שיפור מערכת הגנה קתודית

מפרטי רכישת חומרים

מהדורה: 2
תאריך: 7.03.2026
סימוכין: 160925-2

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מפרטי רכישה

Materials specification PEI -TKH-2025-1	Subject	Revision: 2 Date: 7.03.2026
Prepared for: PEI Co.	Anodes, Centralizers & cables for deep grounded	Prepared: I. Kantor

1. General

- 1.1. This Specification pertains to supply of anodes with their cables and centralizers for installation in 3 deep groundbeds (depth of 80 meters).
- 1.2. The diameter of the drill-holes shall be 12.25" - and shall be executed by the use of Bentonite.
- 1.3. The anode area (the active part of the deep groundbeds) shall be backfilled with " LORESCO" carbon backfill type SC3 including an "Allvent" laser perforated vent pipe.

2. Anodes

2.1. Anode material

Grade I Titanium ASTM B 348 coated with electrocatalytic coating of Mixed Metal Oxides Activation: MMO.

2.2. Anode dimensions

Length - 3 meters min., diameter - 25 mm' min., for soil environment in carbonaceous backfill.

2.3. Anode current

Current output per anode in carbonations backfill - 10 amperes.

2.4. Anode lifetime

20 (twenty) years at rated current density

2.3. Anode type: 10C/FW CerAnode Tubular Anode .

2.4. Anode connection type: **APS connected arc-plasma spray**

2.5. Manufacturer: CerAnode Technologies International manufactures

3. Anode Cables

- 3.1. One anode shall have its own separate cable.
- 3.2. A cable cross section shall be #6 AWG.
- 3.3. Cable insulation: HALAR / HMWPE
- 3.4. The length of each cable shall be according to table attached to this specification.
- 3.5. Each cable shall have prominent readable markings all along its length.
- 3.6. The manufacturer shall present together with his offer documents about cable and insulation testing.

4. Centralizers.

- 4.1. The centralizers shall be supplied by the anode manufacturer and fit the specific anode.
- 4.2. The centralizers shall fit into the **12.25"** diameter bore-hole.
- 4.3. Together with his offer the manufacturer shall supply a dimension drawing of the centralizer and show how anode shall be attached to the centralizer including written

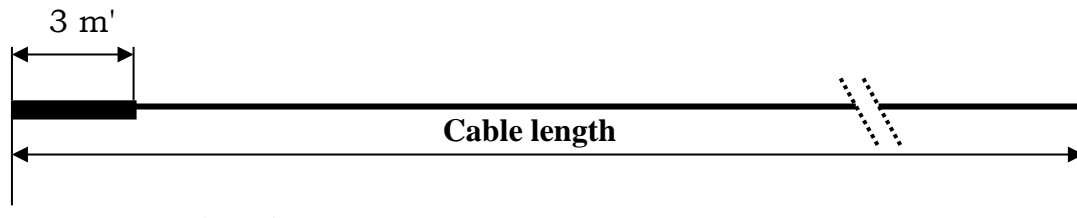
instructions how anodes are to be attached to centralizer- how cables are to be mounted as well as attaching "Ventpipes" to centralizers.

5. Quantities

Herewith a description of items and quantities:

5.1. Anodes and cables

Number	Anode	Cable length	Quantity
1	10C/FW	80 meters	3
2	10C/FW	85 meters	3
3	10C/FW	90 meters	3
4	10C/FW	95 meters	3
5	10C/FW	100 meters	3
6	10C/FW	105 meters	3



5.2. Centralizers – 40 unites.

6. Packing

- 6.1. The anode manufacturer with his offer shall submit a detailed description of materials packing by ship and or by air.
- 6.2 A total weight statement of material plus packing as well as the required volume including packing.

Materials specification PEI -TKH-2025-2	Subject	Revision: 2 Date: 7.03.2026
Prepared for: PEI Co.	Backfilling Material, Vent pipes for Deep Groundbeds	Prepared: I. Kantor

1. General

- 1.1 This specification pertains to the supply of backfill material for a 3 deep groundbeds.
 1.2. Diameter of borehole for deep groundbeds 12.25", depth up to 80 meters, execution by use of Bentonite.
 1.3. Within these boreholes MMO anodes 3 meter long and 1" diameter shall be installed.

2. Backfill

- 2.1. Carbonatious backfill material "Loresco" type **SC3**.

3. Venting pipes

- 3.1. Vent pipes Loresco "Allvent" laser perforated 1" diameter.
 3.2. Length of vent pipe 6 meters.
 3.3. Connection between adjacent vent pipes by bell connection. The price of Bell connection included in the price of the vent pipes.
 3.4. 1" sch 40 PVC end Caps for hermetic closing of "Allvent" pipe.
 3.5. Glue for bell connection and end Caps connection

4. Quantities

Here are the names of items and quantities:

- 4.1. Carbon backfill "Loresco" SC3 – **29,000 Lbs.**
 4.2. PermaPlug "Loresco" – **1,800 Lbs.**
 4.3. Perforated vent pipes – **150 meters.**
 4.4. Non perforated vent pipes – **150 meters.**
 4.5. "1 sch 40 PVC End Caps – **4 units.**
 4.6. Glue - **2 units.**

Materials specification PEI -TKH-2025-3	Subject	Revision: 2 Date: 7.03.2026
Prepared for: PEI Co.	Purchase Specifications Rope	Prepared: I. Kantor

1. General & Requirements

- 1.1. Rope should be continuous along its entire length, without connections.
- 1.2. Rope must withstand with chlorides.
- 1.3. Technical data:
- 1.4. Quality polyester braided rope.
- 1.5. High resistance to friction and UV rays, low level of hardness, soft and comfortable.
- 1.6. Diameter: 12 mm.
- 1.7. Tearing load: 3,910 kg.
- 1.8. Durable with chlorides
- 1.9. The amount of delivery: **110 meters** for one deep groundbeds
- 1.10. Model Recommended: MB12, manufacturer Marlow.