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PROJECT:

142 MW Wind Farm, Tumbler Ridge – BC, Canada

OWNER: Capital Power **YEAR:** 2012

The Details

PROJECT CONTRACTOR:

Eagle West Wind Energy / Mortenson Canada Corporation

PROJECT ENGINEER:

Capital Power

MARKET/ENVIRONMENT:

Wind Power

SUBSTRATE:

Concrete Prepared by High-Pressure Water Blasting

PRODUCT USED:

Five Star[®] DP Epoxy Grout

SIZE OF PROJECT:

79 x 1.8MW Wind Turbine (VESTA) baseplates using approximately 474 Units of Five Star® DP Epoxy Grout

The Challenge – Grouting 79 towers in cold temperatures at a site exposed to extreme conditions.

The Solution —

Able to meet this installation's demanding environmental challenges, **Five Star® DP Epoxy Grout** was chosen for its high strength, superior creep resistance and highest effective bearing area properties.

The turbine base of each tower, ranging from 95 and 100 meters tall, was tented and heated before and post grouting according to Five Star[®] Cold Weather Grouting Guidelines.

Normal operations will resume in 2013.



DP EPOXY GROUT

Dual-Purpose, Deep Pour Precision Grout; Standard/High Flow

PRODUCT DESCRIPTION

Five Star[®] DP Epoxy Grout is the only expansive, non-shrink, low exothermic epoxy system for machinery grouting. This versatile, dual purpose product is formulated for single, large volume placements and may be used as thin as 1/2 inch (13 mm) in depth. Five Star[®] DP Epoxy Grout is a three component, 100% solids, solvent-free system formulated to provide high-strength and superior creep resistance combined with the highest effective bearing area. Five Star[®] DP Epoxy Grout exhibits positive expansion when tested in accordance with ASTM C 827.

ADVANTAGES

 Permanent support for machinery requiring precision alignment Low exothermal properties with early strength development Long working time 	 Solvent-free clean up Adjustable flow for various conditions Expansive, non-shrink per ASTM C 827 Superior creep resistance 	 Chemically resistant 95% effective bearing area (EBA) when following proper grouting procedures Excellent adhesion to steel
USES		
 Large volume applications Foundation rebuilds and skid mounted equipment Precision alignment under dynamic load conditions 	 Vibration dampening for rotating equipment Aggressive chemical environments Support of tanks, vessels and 	 Installation of anchors and dowels Wind turbine baseplates Available for Nuclear Safety Zone Applications¹

rotating equipment

FIVE STAR® SERVICES

- Design-A-Spec[™] engineering specification assistance
- · Technical on-call center with field and project experienced staff
- · Field support representatives for on-site consultation
- Corporate research laboratory available to customize products for unique applications

For worldwide availability, additional product information and technical support, contact your local Five Star[®] licensee, distributor, local sales representative, or you may call the Five Star Products' Engineering and Technical Service Center at 1-800-243-2206 (from the U.S.) or +1 203-336-7900 (outside the U.S.).

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¹Compliant with NRC 10CFR50 Appen-<u>dix B</u> and ASME NQA-1 Quality Programs