SECTION [09 96 00 / 33 05 26] – TAPECOAT® PROTECTIVE COATING SYSTEMS

PART 1 – GENERAL

1.1 SECTION INCLUDES

- Surface preparation and field application of cold-applied Tapecoat elastomeric coatings, high-temperature butyl tapes, hot-applied coal tar wraps, primers, and mechanical rock shields for corrosion prevention on piping, joints, and fittings. [1, 2,]

1.2 REFERENCES

- AAMP / NACE SP0109: Application of Tape Coatings for External Corrosion Protection of Buried Metal Pipelines
- ANSI / AWWA C209: Tape Coatings for Steel Water Pipe and Fittings.
- ASTM D1000 / D149 / G8 / G14 / E96 B / D570: Standard coating testing parameters. [1]

PART 2 – PRODUCTS

2.1 MANUFACTURERS

- Chase Corporation (Tapecoat Division) *(or approved engineer equivalent)*. [1]

2.2 MATERIALS & SYSTEM CHOICES

The contractor shall select and apply the specialized Tapecoat system matching the engineering drawings and operational profiles below: [1]

A. Cold-Applied Elastomeric & Mesh-Backed Tapes (Ambient Temperature Performance)

- Tapecoat H35 (Gray): A 35-mil VOC-free anti-corrosion tape with a Multipolymer Alloy Film (MAF) backing. Formulated with an integrated primer/adhesive layer for above/below-ground small-to-medium pipes. [1, 2, 3,]
- Tapecoat H50 (Gray): A 50-mil variant of the MAF-backed elastomeric line. Designed for higher physical soil conditions above/below grade without requiring separate liquid primer above 40°F.
- Tapecoat M50 / M65 RC (Gray): Heavy-duty cold-applied tapes featuring a woven mesh backing embedded into a 50-mil or 65-mil coating thickness. Engineered to deliver exceptional soil-stress and abrasion resistance. [1]

B. High-Temperature Coating Systems

- Tapecoat 6025HT: A 30-mil, UV-stable, cold-applied butyl-based tape. Rated for high-temperature oil, gas, and wastewater pipelines experiencing constant service temperatures up to 250°F (121°C). [1]
- Tapecoat HT/MB: A 40-mil polypropylene mesh-backed anti-corrosion tape. Formulated for buried high-temperature applications up to 300°F (149°C) to resist severe soil stress on all pipe diameters. [1]

C. Hot-Applied Specialty Wraps

Tapecoat TC 20 Coal Tar Tape: A 58-mil thick, hot-applied coal tar tape activated via torch. Utilized for girth welds, T-joints, bends, and reconditioning below-grade infrastructure up to 120°F (49°C). [1, 2]

D. Specialized Fitting & Joint Wraps

Tapecoat T-Tape: A specialized 65-mil tape with a thin film backing and integrated primer. Engineered explicitly for the uneven profiles of tees and branch fittings below grade.

E. Primers & Accessories

- Tapecoat Omniprime®: A universal liquid adhesive/primer. Mandatory for installations where substrate temperatures drop below 40°F (4°C), or when installing the 6025HT high-temp system.
- Tapecoat Moldable Sealant: A dielectric filler material available in 30, 40, or 60 mil thicknesses. Applied to fill voids, step-downs, weld seams, and transitions before top-wrapping.

- Tapecoat Terrashield®: A 3/8” thick closed-cell polyethylene foam rock shield with 1/4” perforations. Used as a mechanical layer to protect the applied tape from damage during backfilling. [1, 2,]

PART 3 – EXECUTION

3.1 SURFACE PREPARATION

- Clean steel substrate using SSPC-SP 2 (Hand Tool Cleaning) or SSPC-SP 3 (Power Tool Cleaning) to remove scale and rust. For premium environments or high-temperature lines (6025HT / HT/MB), prepare surfaces to an SSPC-SP 6/NACE No. 3 (Commercial Blast Cleaning) profile. [1]

3.2 APPLICATION CRITERIA BY PRODUCT

- H35 / H50 / M50 Series: If substrate temperature is above 40°F (4°C), apply tape directly to clean steel using the integrated primer adhesive. If below 40°F (4°C), pre-coat the surface with Tapecoat Omniprime.
- 6025HT / HT/MB Series: Tapecoat Omniprime is strictly required regardless of application temperature. Apply tape under tension with a mandatory 50% overlap to establish a continuous, multi-layered high-temperature shield.
- TC 20 (Hot Applied): Warm the steel surface and apply torch heat carefully to the adhesive side of the coal tar tape during wrapping to ensure immediate thermal fusion. TC 20 requires the use of a primer prior to application.
- Irregular Geometries: Fill transitions around bolts and flanges with Tapecoat Moldable Sealant to create a smooth, contoured profile before wrapping. [1, 2, 3]

3.3 FIELD QUALITY CONTROL

- Holiday Detection: Sweep the wrapped pipeline with a high-voltage spark tester set according to NACE RP0274 based on thickness:
    - *30–35 mil systems:* 7,400 Volts
    - *50–58 mil systems:* 9,500 Volts
- Mechanical Protection: Install Tapecoat Terrashield rock shield over the tested tape coating before backfilling if the soil contains rocky or abrasive aggregates.