Approval
- ETA-13/0171 – European and Z-30.11-41 – German technical approval available

Resistance to environment
- Highest resistance according to C5-M (seawater) C5-I (industry)

UV-resistance of the 2,6 mm wrap
- Proven for lifetime open air of more than 60 years

Lifetime
- More than 60 years, due to 8 corrosion protection barriers totally

Logitudinal extension at heat
- „0“ due to ductile overlapping system, adhesion and interlocking

Sub-surface migration of water in event of external damage
- Practically „0“ under intact system due to interlocking with cable surface
**Resistance to movement**  
- 500 % ultimate elongation

**Adaptability to surface**  
- Butyl rubber creeps into roughness of substrate surface and thus avoids air inclusions

**Surface pretreatment**  
- No need, on new and old systems applicable

**Connection from cables to structure**  
- Ductility and characteristics of the wrap ensures full tightness over 60 years

**Temperature range**  
- Continuous 24/7: -60 °C to +50 °C, temporary +/-30 K

**Application**  
- With ATIS cable robot and by hand, immediately after application ready to use
No malfunction of butyl rubber protection since 1970 recorded
- worldwide approx. 107.000.000 m² wrapped underground, underwater and open air

Tested according to relevant standards for conventional systems
- All relevant tests were passed without any objection and sign for failure

ATIS Cableskin® sample double tested (DIN EN ISO 11341)
- 2x successfully passed artificial weathering and exposure to artificial radiation

Base layer without top layer tested according to DIN EN ISO 11341
- Base layer alone, without additional protection of the top layer, passed the test too

8 independent protective barriers of 2,6 mm total thickness
- One barrier must be fully damaged by weathering before the next is exposed
ATIS CABLESKIN®

APPROVALS

www.alpintechnik.com

since 1999 ISO 9001 & SCC certified
**ATIS CABLESKIN®**

**COMPOSITION**

Cold welding process by interdiffusion

Many colors available

Tape peeled off from cable surface after wrapping

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since 1999 ISO 9001 & SCC certified
**Base layer:**
stabilized PE-carrier film, double-sided applied with butyl rubber

**Top layer:**
exterior UV-stabilized PE-carrier film, colored, one-sided inside with butyl rubber
CONNECTION TO STRUCTURE

Top layer: PE + butyl rubber

Base layer: butyl rubber

Grounding at the end: butyl rubber primer

Butyl mastic welds with top- and base layer by interdiffusion.
Customized solutions

Twin cable
150 mm diameter

Open cable bundle 600 by 450 mm

Compacted cable bundle
500 mm diameter
THE SITUATION

Corrosion in confined, poor ventilated and bad accessible areas
THE CHALLENGE

Surface preparation with conventional methods
- Sand blasting: poor quality in confined areas
- Protection with paint: bad accessibility, poor quality in confined areas

Execution time with conventional methods
- Long since sensitive to weather conditions

Access and housing with conventional methods
- Complex and costly
- Additional wind loading on the structure
Long term corrosion protection system ATIS Cableskin®

- Safe and approved encasement with ATIS Cableskin®
- 60 years lifetime of the ATIS Cableskin® wrap
- Easy to inspect and maintain
- Combination with dehumidification option possible
- Easy to monitor
- Combination with monitoring system ATIS control possible

ATIS Cableskin® + dehumidification = maximum protection
ATIS CABLESKIN®

SUSPENSION CABLES

ATIS control

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since 1999 ISO 9001 & SCC certified
ATIS control

- Permanent recording of ambient temperature, cable surface temperature and rel. humidity or other data such as amplitudes and tensions

- All values are available online, each of them time-period based and time based

- Data export in Excel-format for further processing and storage

- Cost reduction in maintenance due to early detection of critical conditions

- Enhancement of the buildings documentation
APPLICATION

Low impact on traffic
ATIS CABLESKIN®

APPLICATION

Work at night
Parallel work
ATIS CABLESKIN®

WRAPPING DEVICES

ATIS cable robot
Wind tower, Denmark
Client: DYWIDAG-Systems International GmbH
- **Year**: 2017
- **Type of building**: wind tower
- **Number of cables**: 3 PE-ducted stay cables
- **Cable surface**: PE
- **Total surface to protect**: 190 m²
- **Effective application time**: 3 days
- **Environmental conditions**: C5-M atmosphere, heavy seawater load
- **Preleminary documentation**: none
Fred Hartman Bridge, USA  
Client: Texas Department of Transportation/SCR
- **Year**: 2015

- **Type of building**: cable stayed motorway bridge

- **Number of cables**: 192, parallel wired

- **Cable surface**: Tedlar wrapped, PE sheathed

- **Total surface to protect**: 12,500 m²

- **Effective application time**: 90 days

- **Environmental conditions**: normal, temporary industrial atmosphere

- **Preleminary documentation**: none

- **Other activities**: adjustment of the cable dampers, PE welding
Passerelle des deux Rives, Germany/France
Client: Town of Kehl, Town of Strasbourg
- **Year**: 2008
- **Type of building**: footbridge
- **Number of cables**: 76 full locked
- **Cable surface**: GALFAN with filler partly outside
- **Total surface to protect**: 2.500 m²
- **Effective application time**: 32 days
- **Environmental conditions**: normal, temporary industrial atmosphere
- **Preleminary documentation**: yes, panorama image ATIS Viewer
- **Documentation after application**: yes, panorama image ATIS Viewer
- **Other activities**: pylon inspection
Footbridge Sindelfingen, Germany
Client: Town of Sindelfingen
- **Year:** 2014
- **Type of building:** footbridge
- **Number of cables:** 8 full locked
- **Cable surface:** old paint
- **Total surface to protect:** 30 m²
- **Effective application time:** 4 days
- **Environmental conditions:** normal atmosphere
- **Preleminary documentation:** yes, magneto-inductive inspection
- **Other activities:** protection of the lower connections by **ATIS cable boot®**
Ophus Bridge, Norway
Client: Consolvo, Statens Vegvesen
- **Year**: 2013 - 2014
- **Type of building**: Suspension bridge
- **Number of cables**: 2 main cables (each twin cables)
- **Cable surface**: old paint
- **Total surface to protect**: 130 m²
- **Effective application time**: 35 days
- **Environmental conditions**: normal
- **Preleminary documentation**: yes, visual inspection within arm’s reach
- **Other activities**: dehumidification option, protection of the hanger clamps by **ATIS cable boot®**, monitoring system **ATIS control**
Veterans Memorial Bridge, USA
Client: Texas Department of Transportation/SCR
- **Year:** 2014/2015
- **Type of building:** motorway bridge
- **Number of cables:** 112, parallel wired
- **Cable surface:** Tedlar wrapped
- **Total surface to protect:** 2.330 m²
- **Effective application time:** 44 days
- **Environmental conditions:** normal, temporary industrial atmosphere
- **Preleminary documentation:** none
- **Other activities:** duct repair, PE welding
Köhlbrand Bridge, Germany
Client: HPA Hamburg Port Authority
- Year: 2010
- Type of building: highway bridge
- Number of cables: 88 full locked
- Cable surface: old paint
- Total surface to protect: 2,300 m²
- Effective application time: 81 days
- Environmental conditions: industrial atmosphere, salt spray
- Preleminary documentation: yes, panorama image ATIS Viewer
- Documentation after application: yes, panorama image ATIS Viewer
- Other activities: magneto-inductive inspection
Valley bridge Obere Argen, Germany
Client: Regional council Tübingen, Construction management Town Wangen
- **Year**: 2012
- **Type of building**: highway bridge
- **Number of cables**: 22 full locked
- **Cable surface**: old paint
- **Total surface to protect**: 670 m²
- **Effective application time**: 31 days
- **Environmental conditions**: normal atmosphere, salt spray
- **Preleminary documentation**: yes, panorama image **ATIS Viewer**
- **Documentation after application**: yes, panorama image **ATIS Viewer**
- **Other activities**: retrofitting of bearings, vibration measurements, ultra sonic investigations at cable sockets
Communication mast, Sweden
Client: ÅF, Division Infrastructure, Stockholm
Year: 2011
Type of building: communication mast
Number of cables: one spiral cable
Cable surface: greased
Total surface to protect: 10 m²
Effective application time: 1 day
Environmental conditions: normal atmosphere
Preleminary documentation: yes, panorama image ATIS Viewer
Documentation after application: yes, panorama image ATIS Viewer