

**Instructions for application of insulation coating  
based on asmol roll materials (ARMAS and LIAM) on the linear part of the pipe-  
line**

1. insulation coating on the basis of asmol roll materials is intended for protection against corrosion of the external surface of underground steel pipelines of all diameters during their repair with the temperature of the transported product up to + 60 °C.

**2. The structure of the combined coating:**

- ✓ **Asmol primer;**
- ✓ **Reinforced ARMAS material in one layer;**
- ✓ **LIAM tape in one layer;**
- ✓ **Wrapping tape in 1 layer at least 0.7 mm thick (on customer's request).**

3. Application of protective coating on the basis of asmol roll materials is carried out by electromechanical insulating machines, manual devices of "squirrel wheel" type or manually.

4. The protective coating is applied at ambient air temperature:

- Materials of modification "L" (for summer) from + 5 °C to + 30 °C
- Materials of modification "Z" (for winter) from - 30 °C to + 10 °C.

5. At ambient air temperature from - 10 °C to + 10 °C roll materials of modification "Z" (for winter) before use can be stored in any cold room or outdoors under a canopy excluding direct sunlight or precipitation. At temperatures below - 10 °C they should be kept for at least 24 hours in a room with temperature from - 10 °C to + 10 °C before use. Lifting operations below - 20 °C are not allowed.

At ambient air temperature from + 10 °C to + 30 °C roll materials of modification "L" (for summer) before application can be stored outdoors under a shelter excluding direct sunlight or precipitation. At temperatures below + 10 °C they should be kept for at least 24 hours in a room with a temperature of at least + 15 °C before use. Lifting operations above + 35 °C are not allowed.

6. The process of applying insulation coating to the pipeline consists of the following technological operations:

- **Cleaning of the insulation zone;**

- Preparation for coating;
- Application of insulating coating;
- Quality control of the insulation coating.

7. Before applying insulation the pipeline surface must be pre-drained and cleaned with metal brushes (manually or by cleaning machines) from dirt and rust to the 4th degree of purification according to GOST 9.402-80. The surface of the pipeline shall be free of sharp protrusions, burrs, scoring, metal splashes, flux, which shall be removed. The surface prepared for application of primer and insulation coating must be dry, with no moisture in the form of film, bubbles or ice and frost.

8. After cleaning, the dry and clean surface of the pipeline is coated with asmol primer. The primer is applied manually using rollers or brushes. The primer should be thoroughly mixed before application, it should not contain clots and foreign inclusions. The layer of primer on the pipe surface shall be continuous, even and free of clots, drips and bubbles.

9. ARMAS material is superimposed on a non-dried primed surface. Before starting work, set the required winding angle of ARMAS material and overlap of coils not less than 30 mm. This is done by pre-winding it from the roll onto the pipe without removing the releasing agent. The beginning of the roll should be unwound, freed from the releasing agent and fixed on the section prepared for insulation in the upper part of the pipe in a 1-2 h (10-11 h) position, ensuring overlapping of the insulation coating of the adjacent to the repaired section by at least 75 mm along the entire perimeter of the pipe. In order to attach the ARMAS material, the mastic layer can be carefully heated with a soft flame of a gas burner at a distance of 150-200 mm from the edge until it softens. The attached end should be additionally rolled with a solid roller. ARMAS material should be applied with spiral tension, wrapping the roll around the pipe and ensuring overlap between the tape coils of at least 30 mm. The releasing agent must be removed during the application process.

10. LIAM tape is applied on top of the ARMAS material. LIAM tape should be applied with spiral tension, wrapping the roll around the pipe and ensuring overlap between the tape coils of at least 30 mm, offset by half the width of the ARMAS material. The releasing agent must be removed during the application process.

11. If the coating construction includes a wrap, a wrap layer should be applied over the LIAM tape, the wrap should be applied in a spiral without warps, wrinkles, sags with an offset of half the width of the LIAM tape. The overlap between the coils of the wrapping layer should be at least 30 mm.

12. Quality control of coating according to GOST 51164.

