

PROTECTION OF UNDERGROUND GAS PIPES FROM CORROSION USING POLYMER COATINGS

Jumaboyev Bobojon Olimjonovich

*Senior teacher of the Department of oil and gas, Karshi engineering economics institute,
jumaboyev.123bob@gmail.com*

Ismatov Sherzod Aktam ugli

*Senior teacher of the Department of oil and gas, Karshi engineering economics institute,
sherzodismatov412@gmail.com*

Aqilxonov Kamron Muzrob ugli

*Student of the Department of oil and gas at the Institute of counter-engineering
economics, kamronbekaqilxonov7gmail.com*

Annotatsiya *In this article, we considered the application and advantages of protecting underground gas pipelines from polymer coatings. It is reported that polymer coatings are widely used today.*

Key Words: *polyvinyl chloride, polyethylene, extrusion, ethinol, grontofka, ethinol, route coating, tape.*

INTRODUCTION

Corrosion of metal pipelines means their spontaneous destruction under the influence of various factors of a chemical or electrochemical nature, which is determined by the environment surrounding the pipeline. The environment can be gaseous, liquid and solid. A gaseous medium is usually the atmosphere. A liquid environment affects the pipeline when it is laid underwater through rivers, reservoirs, etc. Hard environment - any soil where the pipeline is laid. Accordingly, the corrosion that occurs in each of these environments is called atmospheric, liquid, and subsurface or soil. They usually affect the outer surface of the pipeline and cause it to break.

Polyethylene insulating adhesive tapes, polyvinyl chloride insulating adhesive tapes, extruded or cut polyethylene, epoxy powder paint, and ethinol enamel are used for the protection of underground pipelines. Depending on the conditions of application, polymer coatings are divided into factory, base or route coatings.

Result: Polyvinyl chloride adhesive tape (TU 6-19-103-78) is made of polyvinyl chloride plastic, perchlorovinyl adhesive layer is used. The tape is designed for wrapping pipes to protect against subsurface corrosion under coating service conditions from + 40 to - 300 C. Application to the pipe is allowed only at a positive temperature not lower than + 50C.

DISCUSSION

Polyethylene protective coatings are also highly resistant to external influences after installation, such as soil aggressiveness, fresh and salt water, marine plant organisms, terrestrial plant shoots, microorganisms, and a relatively wide range of minerals. . Oils and chemical attack. Polyethylene coating has a high electrical resistance that remains constant for a long time. This feature is important for electrochemical protection.

Pre-applied protective coatings based on powder polymers should be applied at the temperature of the product transported in pipes of any diameter: + 700 C for polyethylene coatings, + 800 C for epoxy coatings. Protective coatings based on polymer tapes can be used in pipelines with a diameter of no more than 1420 mm at the temperature of the transported product: + 600 C for polyethylene tapes, + 400 C for PVC tapes.

Grontofka

Adhesive or bituminous adhesive primers are used under the coating of polymer adhesive tapes.

The temperature range for applying coatings from polymer tapes to the applied primer should correspond to the technical specifications for this type of tape, but should not be lower than -600 C and not higher than 70 - 800 C.

Protective coatings made of polymer adhesive tapes

To protect pipes from corrosion, polymer adhesive tapes should be used, as a rule, with a combined method of insulation and laying works. For small-diameter pipes, pre-insulation with tape is allowed on the insulation bases.

According to GOST R51164-98, the structure of the protective coating of polymeric adhesive tapes consists of a single-layer polymer insulating tape and a lining of the outer coating.

Polymer adhesive tapes must meet the specified requirements in accordance with GOST R51164-98. The layer of glue on the plastic must be continuous without gaps. The rolls of the tape should not melt at the ends, the tape turns should be clearly visible when the network is installed. The glue should not go to the other side of the mesh. The manufactured tape is wound on a core with an inner diameter of 75 ± 5 mm.

Conclusion: Thus, polyvinyl chloride adhesive tape is made of polyvinyl chloride plastic, perchlorovinyl adhesive layer is used, and it allows to use the useful properties of metal, to significantly increase the durability and durability of metal products, machine and mechanism details, and to economize on the use of large quantities of expensive and scarce materials. These properties of polymer coatings are considered important for the national economy

REFERENCES:

1. Ибодуллаев А. Исследование свойств эластомерных композитов, пластифицированных фурановыми олигомерами//Композиционные материалы. – Ташкент, 2004. – № 1. – С. 9-11

2. Ибадуллаев А., Тешабаева Э.У. Негматов С.С., Таджибаева Г.С. Исследование физико-механических свойств минеральных наполнителей и методы их модификации // Журнал «Композиционные материалы» - Ташкент, - 2006. - №1. - С.27-29.

3. Teshabaeva E.U., Vapaev M., Ibodullaev A.. Modifikasiya mineralnykh napolniteley i ix vliyanie na svoystva rezin. . Austrian Journal of Technical and Natural Sciences Austria. 2016., №3-4,- S.125-128. (02.00.00, №2).

4. Жумабоев, Б. О., & Исматов, Ш. А. (2023). Свойства и технология многофункциональных органоминеральных покрытий, устойчивых к агрессивным

средам, для крупнотоннажного оборудования по сбору, хранению и транспортировке нефти и газа. *Journal of multidisciplinary bulletin*, 6(4), 86-92.

5. Ataqllova, D., Bobomuradov, U., Oripova, L., Ismatov, S., Kurbanov, M., & Kodirov, A. (2023). A New Highly Effective Inhibitor Based On 2, 7-Dimethyl-2, 7-Dicyano-3, 6-Diazaoctan. *Journal of Pharmaceutical Negative Results*, 883-889.

6. Kibriyo, B. O. T. Z. M., & Aktam o'g, O. I. S. (2023). Study of secondary methods of oil production in the last period of operation. *Innovations in Technology and Science Education*, 2(8), 397-400.

7. Allanazarovich, M. Z., & Mustfojevich, A. S. (2022). Prevention of potential metal deposition in industrial equipment.

8. Olimjonovich, J. B. (2024). BENZIN TARKIBIDAGI BENZOLNING OLINISH USULLARI VA XOSSALARI. Sanoatda raqamli texnologiyalar/Цифровые технологии в промышленности, 2(1), 119-122.

9. Dustqobilovna, E. F., Olimovich, J. B., & Sodiqovych, O. C. (2024). USE OF ACETYLENE DIOLS AS AN INHIBITOR IN THE CORROSION OF METALS.

10. Dustqobilovna, E. F., Olimovich, J. B., & Furqatjonovich, N. F. (2024). Testing and exploration of gas wells. *Periodica Journal of Modern Philosophy, Social Sciences and Humanities*, 27, 51-54.

11. Bobojon, J., & Jasur, Q. (2023). Karbonsuvchillarning qatlamda to 'planishiga qarab neft va gaz konlarining turlari. *Research and Publication*, 1(11), 10-13.

12. Bobojon, J., Yaxyobek, I., & Yigitali, I. (2023). Tabiiy gaz va gaz-kondensat konlaridagi gazlarning tarkibi. Tabiiy gazlar tasnifi. *Research and Publication*, 1(11), 14-19.

13. Жумабоев, Б. О., & Егамназарова, Ф. Д. (2023). РАВНОВЕСИЕ ДВИЖУЩАЯ СИЛА И КИНЕТИКА АБСОРБЦИИ. *JOURNAL OF MULTIDISCIPLINARY BULLETIN*, 6(5), 39-49.

14. Raxmatov, E. A., Abdullayev, A. A., & Jumaboyev, B. O. (2022). POLIETILEN ISHLAB CHIQRISH LINIYASIDA SOVUTUVCHI TIZIM QURULMALARINI TAKOMINLASHTIRISH. O'ZBEKISTONDA FANLARARO INNOVATSIYALAR VA ILMIY TADQIQOTLAR JURNALI, 2(14), 246-250.

15. Egamnazarova, F. D., Jumaboyev, B. O., & Rizayev, S. A. (2022). REDOKS ORQALI NAFTADAN ETILEN ISHLAB CHIQRISHNI KUCHAYTIRISH, KREKING SXEMASI: JARAYONNI TAHLIL QILISH. O'ZBEKISTONDA FANLARARO INNOVATSIYALAR VA ILMIY TADQIQOTLAR JURNALI, 2(14), 1061-1069.

16. BO, K. O. E. F. J. (2023). STUDYING THE ACTIVITY OF THE CATALYST DURING THE PRODUCTION PROCESS OF SYNTHETIC LIQUID HYDROCARBONS. *Химическая технология*, 64(11), 116.

17. Dustqobilovna, E. F. (2023). GAZLARNI KIMYOVIY ARALASHMALARDAN TOZALASH JARAYONINI TADQIQ QILISH. O'ZBEKISTONDA FANLARARO INNOVATSIYALAR VA ILMIY TADQIQOTLAR JURNALI, 2(23), 18-24.

18. Rizayev, S. A., & Jumaboyev, B. O. (2022). «AZKAMAR» KONI BENTONITI NAMUNALARINI O 'RGANISH. *Journal of Integrated Education and Research*, 1(6), 149-152.

19. Rizayev, S. A., Jumaboyev, B. O., & Yuldashev, X. M. (2022). ATSETILEN DIOLLAR SINTEZI VA ULARNING XOSSALARI. Journal of integrated education and research, 1(4), 218-223.