

ASPECTS RELATING TO EXPERTISE OF THE MAST COAL MINING MACHINES – THE SECOND PART

Lecturer PhD Eng. Stăncioiu A., *Constantin Brâncuși” University of Tg-Jiu, ROMANIA*

Univ. Prof. Eng. Cîrțină Liviu Marius, PhD *“Constantin Brâncuși” University of Tg-Jiu, ROMANIA*

Lecturer PhD Eng. Rădulescu C., *Constantin Brâncuși” University of Tg-Jiu, ROMANIA*

ABSTRACT: In this paper we continue to present the technical state of the mast of a coal-mining machine, following technical expertise. The rehabilitation to which the mast will be subjected will be done by carrying out the intervention works which will restore in the normal operating parameters both the structural part and the functional part.

KEY WORDS : device, horizontality, cabin, machine, coal.

1. INTERVENTIONS ON M4A COAL MACHINE FROM S.E ROVINARI

From the information received from the coal deposit sector we have the following chronologically presented data;

- 1) Shortening the porthole arm from assembly and adapting the excavation machine from the previous generation "T2052" in 1983, earlier this year was the cause of the PIF's delay in the previous year.
- 2) Intervention of the replacement of the fixed support "A" (factory after some unofficial information from IUM Tg-Jiu that was part of IPAMRCUM - the current GRIMEX) in 1991.
- 3) Replacement of the main oscillating beams and the spherical support in 2002 due to the penetration of water from precipitation and freezing in winter, which led to the deformation of the lateral walls.

The new beam has no water drain holes.

- 4) Replacing the drive reducer welds with minor exceptions that will be shown in the following photos. The rust that attacked the paint at the top of the beams

belt conveyor on elinda in years; 1993, 2004 and 2009.

5) Replacement of the bearing from the rotation of the superstructure in 2002, after 19 years of operation

6) Replacement of the lifting gear, of the wheel arm with a "CEHIA" two-head manufacture at the input shaft in 2004.

7) Dismantling the wheel reducer in 2014 and replacing it with another one, repaired after one year in 2015.

8) The total number of operating hours of approx. 28 000 in the 34 years from the PIF with the interruptions caused by the accidental repairs presented.

We mention that the current car has the wheel of the T2052 with 8 cups, on the construction T2846 which had 10 cups.

3. PROPOSALS AND REMEDIES - CONTINUATION

The ears of battery mounting on the mast have no particular problems with

the various points of fact possible to the mast in the outer areas where the intersections maintain the moisture and the coal dust.



Fig.1 Rust attacked the paint

Incomplete welds, which will be repaired for repair, the areas were painted red. Rust attacked the paint of the mast.



Fig.2 Incomplete welds to support the lower part of the roller battery

Incomplete welds to support the bottom of the roller battery on the mast. The rust that attacked the mast paint on both the outer and the hard-to-reach areas.



Fig.3 Incomplete welds to support the upper part of the roller battery.

Incomplete welds to support the top and bottom of the roller battery on the mast.



Fig.4 Incomplete welds to support the top and bottom of the roller battery on the mast.

Ears for mounting the cable change device on the mast they have no problems with the welding on the front. The rust that attacked the paint from the front of the mast beam on the outside



Fig.5 The rust that attacked the paint from the front of the mast beam on the outside

There are pendular executions that will not be interfered. The rust that attacked the paint of the mast. There are pendulum-sized welds over the required size.



Fig.6 Pendulum executed welds with a size above what is required

View of the eyelet of the cable change lever. The rust that attacked the paint on the outside parts.



Fig.7 View of the eyelet of the cable change lever

Ears mounting thrusts I and II, mast, problems on welds execution on the front were presented. Paint rust which attacked from the front of the beam mast on the outer areas.



Fig.8 The rust that attacked the paint on the front of the mast beam on the outside.

The ellipse mast has a whole beam with a rusted surface, especially the areas of thermal influence of the welds.



Fig.9 The mast clamping part of the ellipsis mast has the whole surface with rusted surface

1. GENERAL CONCLUSIONS

- 1) It does not show areas with major exploitation and / or execution deficiencies.
- 2) Small imperfections, deficiencies and cumulative degradations in an unfavorable exploitation context can be associated with an unexpectedly serious result.

2. BIBLIOGRAPHY:

1. Kuzneţov, V. S., Ponomarev, V. A. – Universalno-sbornie prisposoblenia. Moskva, Maşino-stroenie, 1984.
2. Lange, K., – Lehrbuch der Umformtechnik. Berlin, Springer-Verlag, 1985.
3. Stăncioiu, A., Şontea, S., - Studies/investigations concerning the durability of the nitrided cutting tools within the technological process of the punching/stamping, 02-04 september 2002, Vrnjacka Banja, Yugoslavia;
4. Stăncioiu, A., Şontea, S., - Studies/investigations concerning wearing effect of the tools on the forces within the punching/stamping process , 02-04 september 2002, Vrnjacka Banja, Yugoslavia;
5. Cîrţină Liviu Marius, Rădulescu Constanţa, Militaru Emil - Aspects regarding the method of realizing the technical expertise for repairing the translation mechanism of a M4A coal-mining machine - Fiabilitate si Durabilitate - Fiability & Durability No 1/ 2018, pag. 149-152 Editura “Academica Brâncuşi” , Târgu-Jiu, ISSN 1844 – 640
6. Cîrţină Liviu Marius, Rădulescu Constanţa, Stăncioiu Alin - MODERNIZATION M4A COAL EXTRACTION MACHINE - Fiabilitate si Durabilitate - Fiability & Durability No 1/ 2018, pag. 153-156- Editura “Academica Brâncuşi” , Târgu-Jiu, ISSN 1844 – 640.
7. Dumitru Sfirloaga, Victor Arad, Rădulescu Constanţa - WAYS OF REALIZATION OF COAL DEPOSITS - Fiabilitate si Durabilitate - Fiability & Durability No 1/ 2018, pag. 220-223- Editura “Academica Brâncuşi” , Târgu-Jiu, ISSN 1844 – 640
8. Dumitru Sfirloaga, Victor Arad, Rădulescu Constanţa -STUDIES ON THE MODERNIZATION OF LARGE CAPACITY EXCHANGERS EXISTENCE IN MINIER ROVINARI BASIN - Fiabilitate si Durabilitate - Fiability & Durability No 1/ 2018, pag. 224-227- Editura “Academica Brâncuşi” , Târgu-Jiu, ISSN