

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

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

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

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

ABSTRACT: This paper presents 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. INTRODUCTION

M4A Mounted Exporter in the SE Rovinari warehouse with "T2846-modified" sign. It was manufactured in 1980-1981 by UM Timisoara, for the thermoelectric power plant Anina and relocated and directed from the plant at the Rovinari plant. The reference model after which it was designed and manufactured, are the cars to be removed from CS Galati (the acce of "Arcelor Mittal Galati "), those with a long arm (from 36 ml with two sections and two struts), the one designed and executed with a 20 m long arm section with the T2052 sign in 1978, then with a 30 m crossing with T2846 in 1979.

2. MAST

The mast, which together with the ellipse and the tie I form a non-deformable triangle (see photo from the next page), to allow the vertical swinging of the porthole wheel. Approaching or removing the mast from the balance arm is done with the cable lug $\phi 36$ between the top of the actarg where the roller battery is mounted and the fixed battery on the upper platform of the lifting mechanism.

The view area in "A" of the sketch below is strongly requested.

The "C-C" section area required both on the front and the rear to the traction by the cable hook at the rear and the front swinging need to be deepened during the expertise but will be followed by a very careful handling in

the repair time when using the crane will continue the total control, considering that for the SSM reasons the full beam gauge with compressed blades has not been reached, the climb staircase allowed inspection and control on the right-hand side.

Continuing the control will follow the stall with which it carries out the triangle of forces that are disassembled on the rotating platform assembly and from here are taken over by the bearing and transmitted to the supporting triangle (the part of the car infrastructure).

The assembly as seen in the views of Fig. 2 does not have serious degradations, but we will still show the places where some minor repairs are required.

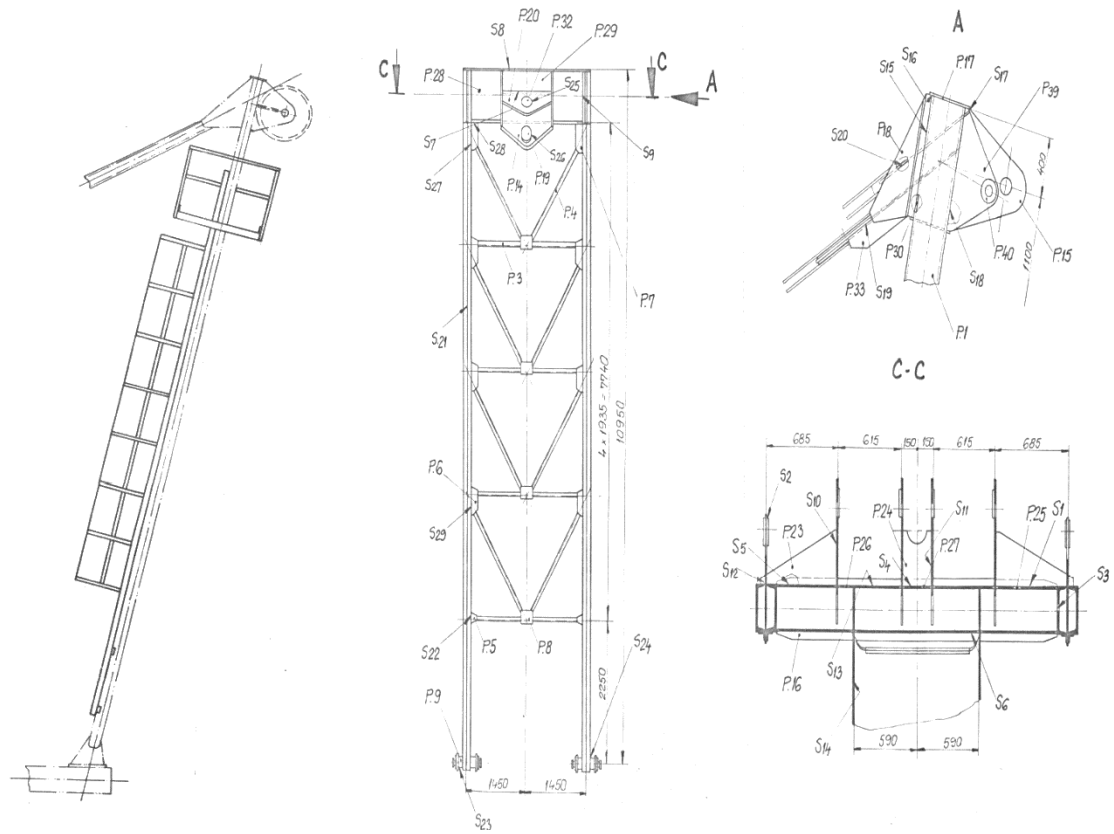


Fig.1 Outline of the ensemble "Pillar" with details



Front view from below

Top rear view

The triangle, elinda-pillar-thrusts I

Fig.2. Mast views

3. PROPOSALS AND REMEDIES

Welding control has shown that there are areas with incomplete and unsealed welds, will be restored and then repaired with penetrating liquids.

Rust attacked the paint from the upper part of the mast and penetrated the welded sheets in the end gap at unsealed welds.



Fig.3 Rust attacked the paint

Incomplete welds will be repaired, the areas painted red to be easily visible during repair.

They are located in places difficult to reach and at high places and as a result special safety measures will be taken during welding.



Fig.4 Incomplete welds

Incomplete welds in hard-to-reach areas that will be repaired on repair, the areas painted red. The rust that attacked the paint at the top

of the mast and penetrated between the welded sheets in the end gap at unsealed welds.



Fig.5 Incomplete welds in hard-to-reach areas

Welding with marginal burns to be repaired on repair, areas painted red. The rust that

the outside and hardly accessible areas, the cleaning and dyeing will be performed

attacked the paint at the top of the mast beam both on

following the instructions attached to this expertise.



Fig.4 Welding with with marginal burns

2. CONCLUSIONS

1) It does not show areas with major exploitation and / or execution deficiencies.

2) Small imperfections, shorts and cumulative degradations in an unfavorable exploitation context can be associated with an unexpectedly serious result.

3. BIBLIOGRAFIE:

1. Kuzneţov, V. S., Ponomarev, V. A. – Universalnovo-sbornie prisposoblenia. Moskva, Maşino-stroenie, 1984.

2. Lange, K., – Lehrbuch der Umformtechnik. Berlin, Springer-Verlag, 1985.

3. Stăncioiu,A., Şontea, S., - Studies/investigations cocerning the durability of the nitrided cutting tools within the tehnological 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 tehcnical 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 -

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