

## IDENTIFYING THE OPTIMUM SOLUTION FOR REPLACING HYDRO-AGGREGATES AT THE CENAD PUMPING STATION

### Goal of the project

The beneficiary "EMILIANA WEST ROM" in Dudeștii Vechi is an agricultural company and calls for the increase in the useful flow given by SP Cenad. To address this, the representatives of SC EMILIANA WEST ROM have requested refurbishment of the Cenad pumping station in order to achieve a flow rate between 4 ... 5 m<sup>3</sup> / s, but involving minimal adaptation of the new equipment in the SP building

### Short description of the project

SP Cenad refurbishment can be done in the following ways:

- Replacing one of the pumps with a larger flow pump;
- Replacement of both pumps, which in parallel operation to provide a flow in the proposed range.

### Implementation period

07.03.2018 – 30.04.2018

### Main activities

- State of the art for "identifying the optimum solution for replacing hydro-agregades from Cenad Pump Station".
- Analysis of 5 variants and proposal to the beneficiary of the optimal hydraulic and economical solution.

### Results

Following the analysis of the five variants, it leads to the recommendation of applying the solution with the following characteristics:

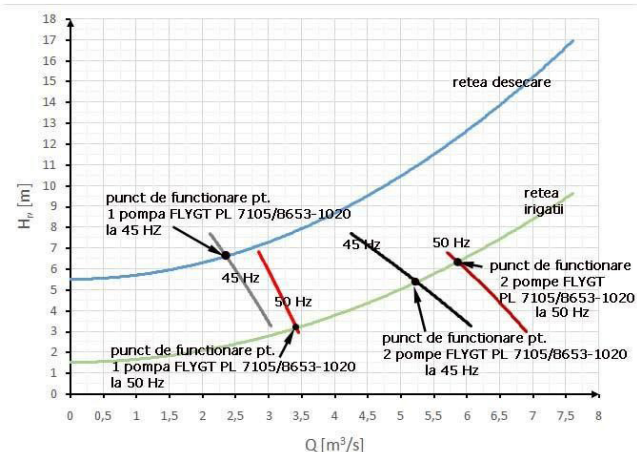
- Achieves a flow rate of approximately 2.35m<sup>3</sup>/s for drainage at a useful pumping height in SP Cenad.
- Electric motors have rated unit power  $P = 230\text{kW}$ .
- The construction dimensions and installation dimensions of the pumps presuppose work without affecting the structure of the building.
- The electrical transformer and other electrical equipment must be replaced or upgraded.

### Financed through/by

EMILIANA WEST ROM SRL

### Applicability and transferability of the results

The beneficiary immediately implemented the proposed solution by the acquisition and installation of a new pump in the pumping station Cenad with the features shown in the figure below.



### Research Centre

Research Centre in Engineering Systems with Complex Fluids

### Research team

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