Relocation does not greatly affect the stress conditions

The authors Dragan Ignjatovic, Lidija Djurdjevac Ignjatovic and Milenko Ljubojev emphasize that capacity expansion of the Flotation Field I is necessary due to the increasing capacity of the Veliki Krivelj flotation. The capacity of the existing flotation tailings pond is becoming too small to absorb new material. For this reason, it is necessary to find a transitional solution allowing smooth operation of the Veliki Krivelj flotation for a period of 3 to 4 years, depending on the adopted tailings pond concept.

There is an urgent need to approach the planning and design of a new tailings pond to resolve the tailings disposal problem in the long run, especially as the Krivelj flotation is processing over 13 million tons of ore per year, 10.6 Krivelj + 2.5 Cerovo. The possibilities to expand the capacity of the existing tailings pond in the valley of the Krivelj River downstream of the Krivelj flotation was examined.

From the Veliki Krivelj flotation to the tailings pond site, tailings are gravitationally transported over a 9 km long concrete channel. Subsequently, from the concrete channel to the sand dams of the tailings pond, tailings also are also gravitationally transported by means of cascades. From the cascades, the pulp is fed to the hydrocyclones placed on the sand dam crests where sludge and sand are separated.

Based on the earlier geo-mechanical data obtained through different investigations, as well as the proposed relocation of the existing dam 2, aimed at increasing the Flotation Field I capacity, impacts of flotation and rock masses on the new Krivelj River collector route were analyzed by applying the Phase2 software package.

The results show that the relocation of the Flotation Dam 2 does not greatly affect the stress conditions occurring in the area of the future Krivelj River collector. Despite these results, it is necessary to continuously monitor the future route of the Krivelj River collector, together with the Flotation Dam 2 relocat