

VISITA CENTRALE IDROELETTRICA DI SUVIANA

Il giorno 24 aprile 2018 la classe 5^{EA} ha visitato la centrale idroelettrica di Suviana, accompagnata dai professori Bendinelli, Colombino e Panconi.

Appena arrivati siamo stati accolti da 2 tecnici che ci hanno guidato per tutta la durata della visita.

Inizialmente abbiamo visto la diga (terminata nel 1932) e 3 condotte forzate che portano a 3 grandi gruppi di generatori; successivamente la visita è proseguita all' interno della centrale, dove sono situati gli alternatori, le turbine e tutta la strumentazione elettronica necessaria al funzionamento.

Turbina:



Alternatore:



E' stata una mattinata molto interessante per i ragazzi che hanno potuto vedere come viene prodotta l' energia elettrica nella centrale. L'alternatore è stato oggetto di studio per i ragazzi del corso di elettrotecnica, in questo modo hanno potuto vedere la sua applicazione nel mondo della produzione dell' energia elettrica. Ci teniamo quindi a ringraziare per l' accoglienza e la disponibilità i tecnici della centrale di Suviana.

Wow, on the road again!

On 24th April class 5[°]EA, from ITTIS "FEDI-FERMI" Pistoia, accompanied by three professors, Mr Bendinelli, Mr Panconi and Mr Colombino, went to Suviana, a place in the mountains near Bologna, to visit a hydroelectric power plant. Soon after getting off the bus, just outside the power plant, we noticed two turbines of different size, type "Francis," dating back to the 1930s, which caught our attention, everyone was interested in observing them carefully, some students took photos. Two technicians were waiting for us to show us how electricity is generated there. The first thing we saw was the dam, a powerful wall constructed across the river to hold back water; the technicians told us that during world war 2 the German Army, while they were in retreat, tried to blow it up, but luckily they didn't manage. Just on the wall side there were the penstocks, four pipelines running down the slopes, leading to the turbines. When the intake valve opens, gravity pulls the water through the penstock, as water flows, it builds up pressure and strikes the blades of the turbine which turns. The turbines are connected to a generator which, by means of electromagnetic induction, converts the mechanical motion of the turbine into electricity. Before visiting the inside, we were all provided with safety helmets and the visit started. We were shown several control boards and a PLC to keep under control both the electric motors and the grid 24 hours a day. In an underground floor we saw the alternators turning 1000 turns per minute. That is a pumped - storage plant which has got two reservoirs; during the off - peak hours, using a reversible turbine, the plant pumps the water back to the upper reservoir, so the plant has always water available to produce electricity. The visit lasted 2,30 hours. Everybody enjoyed every moment of the visit. I think this is a valuable experience for school leavers who are getting ready to enter the world of work.

Pietro Colombino

