

DISCUSSION

CONCEPTS SESSION

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The Co-generation plant : Beneficial for CERN or a waste of money ? (M. Wilhelmsson)

Where are the maintenance costs hidden ?

They are included in the pay-off calculation.

Is manpower also included into operation costs ?

Yes, except CERN's staff who is paid from personnel budget.

What is the lifetime of the turbine ?

The lifetime is difficult to estimate, but after some 40000 hours of operation, a full inspection is necessary.

Is it possible to use the exhaust gases to preheat the intake air for the boilers ?

Yes, it is possible, but for the time being this solution hasn't been taken into consideration.

Isn't the building housing the gas turbine over-dimensioned ?

It was designed by general contractor in collaboration with civil engineers.

Are the noise standards met ?

Yes, inside the building they conform to the specification, but outside (at the limit of CERN's property) they are lower than the "background noises".

Is the chimney going to be painted ?

For the time being no, since it has been already protected with the anti-corrosion oxide layer.

A new water supply concept for CERN (J. Inigo-Golfin)

Who is going to be the owner of the new pumping station "Vengeron" ?

FIPOI, SIG and CERN will be only the users. The status of the new station will remain that of today, owned by FIPOI and operated by SIG.

Have any magnet's temperature tests been carried out ?

Yes, and they showed that in most of the cases the higher temperature is acceptable, but for example SEPTA magnets will need different means of cooling in order to maintain the inlet temperature below 20°C and their resistivity within acceptable limits.

What will be the supply in drinking water for the Preveessin site ?

It will be supplied by the new pipeline coming from the new pumping station No 7.

Plafonds froids et introduction d'air laminaire (P. Pepinster)

What are the disadvantages of cooling ceilings ?

Higher investment (around 30 % more comparing to conventional systems).
A building must be adapted to the specific installation.

What is the mean investment cost per kW of cooling power ?

~ 1000 CHF/ kW of cooling power.

What is the compatibility of cooling ceilings with lighting ?

Position of cooling elements must be studied in parallel with an electrical designing work in order to avoid any collisions.

Is the higher investment cost justified ?

Normally yes, since the pay-off period is generally 10 years. However at CERN the investment and operation budgets are different and therefore pay-off period is not a major factor for the investor.

Conception aéraulique pour Expérience ATLAS (J. Roche)

How were the air flows calculated ?

For the experimental areas the announced heat gains allowed to calculate the necessary air flows.

From which budget will the works be financed ?

Only technical aspects are of interest of the speaker.

What are the precautions that must be undertaken in order to improve the quality of the exhaust air and not to contaminate the environment ?

The air from the underground caverns will be constantly filtered before rejecting to the atmosphere and the air quality will be constantly controlled.

How will be the ventilation assured during the transient period (between LEP and LHC) ?

The new air handling units will be installed while the LEP ventilation will still work. A period of around 3 months will be necessary to lay down and connect the duct's network.