

桃江电站厂用电耗电率计算书

桃江水电站机组运行时重要负载有：

润滑油泵	15kw
技术供水泵	30kw
压油泵	37kw
高顶泵	18.5kw
低压气机	22kw
高压气机	15kw
自动化照明及其他	20kw

运行时长时间投入的有 润滑油泵 技术供水泵 自动化照明及其他。

压油泵利用率 50% 高低压气机利用率为 20% 高顶利用率 1%

每 小 时 厂 用 电 的 耗 电 量 $=15+30+20+37*50\%+ (22+15) *20\%+18.5*1\%=92.35\text{kw}$

一台机组年平均发电量为 8000kw

厂用电耗电率为 $92.35/8000*100\%=1.154\%$

考虑到其他耗电因数 设定为 1.2%

Calculation on the own demand Electricity of Taojiang Hydropower Plant

The mains loads during operation:

lube Pump 15kw

Technical Water Supply Pump 30kw

Force feed lube Pump 37kw

高顶泵 18.5kw

Low pressure exhauster 22kw

High pressure exhauster 15kw

Auto-Control System and illumination etc. 20kw

Lube Pump, Technical Water Supply Pump, Auto-Control System and illumination etc. often serves with long duration.

The occupied rate of others are 50% for Force feed lube Pump; 20% for High pressure exhauster; 1% for 高顶泵.

Then own demand Load of the plant = $15+30+20+37*50\%+ (22+15)*20\%+18.5*1\%=92.35\text{kw}$

The annual average capacity/ unit is 8000kw

Own-demand ratio: $92.35/8000*100\%=1.154\%$

Considering the other marginal load omitted, the ratio would be 1.2%.