????? ????? ?? ???? ????? ????? ?????? ????

?? ???? ???? ???? ?????? ?????? ????? ????, ?? ??????, ?????? ????? ?????? ???? ?? ???? ????? ?? ???? ??? ??????? ????? ???? ??????? ?????? ????? ?? ???? ??????, ???? ???? ???? ???? ??????

"???? ???????? (?????? ????) ????? ?????? ?????? ?? ????? ???? ?? - '???? ?????, ????? ?? ????? ????'. ????? ???? ???? ?? ????? ???? ???? ?? ?????? ???? ???? ????? ?????? ?? ??? ??????? ? ???? ????? ????? ????? ????? ????, ??? ???????? ?? ?????", ???? ?? ??????, ???? ???? ?????? ?????? ????? ????.

"?? ????? ??????, ?-1999 ?????, ???? ??? ???? ????, ?????? ??? ????? ?? ?????? ?? ?????? ?? ?? ???? ????? ????? ???? ???? ?????? ???? ???? ?? ?????? ???????? ???? ??????".

?? ?? ????? "?????? ?????? (????? ?????? ??????? ?????? ?????) ????"? -2004" ?? ???? ??????? ?????, ?? ???? ????? ?????? ????? ??? 150,000 ???"? ????? ???? ?????? ?????? ?? ??? ???? ????? ???? ???? ??????? ?????, ??? ?-30 ???? ?? ???? 7,500 ???? ?????.

?? ?? ??????, ?????? ???????????? ?????? ??????? ??????, ?????? ?????? ??????? ?????? ??????? ????? ?????? ???????? ?? ??????, ?????? ?????? ???????.

??????? ?????? ?????? ????? ????? ????? ????? ?? ??? ??????, ????? ?????? ?????: ???? ?????, ??????, ????? ????????? (???? ???? ?????, ?????, ????, ??? ????).

????? ??? ???????? ????? ???? ??????? ??? ????? ??????? ?????? ?????. ???? ??? ?? ????? ?????? ???????, ?????? ???? ??? ?????? ??? ???? ????? ?? ?? ??? ???? ??? ??????? ???????, ???? ????? ????? ?????. ?????? ?????, ?? ???? ????? ???????? ??? ????? ?????? ???, ?? ??? ????? ??????? ??????? ?????????.

"???? ????? ?????? ????? ?????? ?????? ?????? ?? ?????? ??? ????? ?????? ?????? ?? ??? ?????? ??????? ??????? ????? ???????.

????? ????, ???? ??????? ?????? ?????? ?????, ????? ?????? ??? ??? ??? ?? ???? ??? ????, ??????? ?? ????, ?????? ????? ??????? ????? ?? 65% ?????. ????? ???, ????? ???, ????? ????? ??????? ?? 55%.

"????? ?????, ????? ?????? ???????? ?????? ?????? ???????, ????? ????? ??????
?????? ????? ??????? ????, ?????? ?????? ????? ???? ???????? ??????? ?????"

????? ????? ??????? ?????

Q ????? = (m3/h)

H ???? = (m)

n ?????? = (%)

P ???? = (HP ?? Kw)

$$P_{HP} = \frac{Q \times H}{270 \times n} \quad | \quad P_{Kw} = \frac{Q \times H}{367.2 \times n}$$

"????? ?????, ????? ?????? ???????? ?????? ?????? ???????, ????? ????? ?????? ?????? ?????
??????? ????, ?????? ?????? ????? ???? ???????? ??????? ?????. ???? ???, ???? ????? ??????
?????? ????? ???? ?????? ???? ????? ?? ?????? ??? ????? ?????? ?? ???? ?????? ???? ???????,
????, ?????? ?????????? ????.

"????? ?????? ????, ????? ?????? ??? ??? ????? ?? ????? ???? ?? ???? ??????, ?? ?? ????? ????,
???? ????? ??????? ???? ?????? ???????. ?? ???? ????? ????? ????? ?????? ?????? ??????? ???? ??
????, ????? ?????? ??? ????? ????? ?"????" ????? ?? ????, ????? ????? ????? ?????? ????? ????
???? ??? ????? ????? ??????. ?? ??? ????? ???? ???? ??? ???? ??????? ?????? ??????? ?????? ?? ??
??? ??????? ??????? ??????? ???? ???? ????? ????? ????? ??????? ????? ?????? ????????? ????.
"??? ???????? ??????? ????? ???? ??? ????? ?????? ???? ??? ????? ????? ?? ???????? ????? ??
????? ??? ???? ??? ????. ?????? ?? ???? ???? ??? ????? ?? ?????? ?????? ?? ?????? ???? ????? ??
??? ???? ?????? ?????. ????? ???? ???????? ????? ???? ?????? ?? ????? ?????? ????? ???. ?????,
??? ???? ????? ??? ????? ??????? ????? ????? ?? ?????? ?????????? ?????? ?? ?????? ?????? ????
????. ?????, ??? ???? ?????? ?? ?????? ????? ?? ?????? ?????? ????? ???? ?????? ???? ??????
????? ???? ???? ????? ???? ????? ??????? ??????, ???, ?????, ????? ?????? ???????? ????????
?????? ?? ?????. ???? ?? ????? ???? ???? ???? ?????? ??? ????, ??????? ????? ????. ????? ???? ???
????? ????? ??????, ?? ????? ?? ????? ??? ???? ?? ???? ?????, ?????? ??? ?? ????? ???? ?????
?????? ?????? ?? ????? ??????? ?? ???? ?????? ????? ?????? ?? ???????.

"?? ??? ???? ???, ????? ????? ?? ????? ????? ?????? ?????? ?? ???? ???? ??? ????. ???? ??? ???? ??? ???? ?????? ????? ????? ??????? ????? ??????? ?????? ?????? ????? ??? ?????? ?????? ?????? ????? ?? ????".

?????? ??????

"????? ????? ?? ???? ????? ????? ?????? ??? ???? ?????? ??? ??????? ?????? ????, ??? ????? ?????? ?????? ??? ????? ?? ??????? ??????????? ??????? ??????, ?? ?????? ????? ???? ?????? ?????? ?????? ????? ?? ????? ????? ???.
??????? ?????? ???? ????? ??????, ???? ?????? ????, ????? ?????? ?? ??? ??? ?? ??? ????????

??????????? ???? ?????, ?????? ????? ??????? ????? ??? ?? ???? ?????? ??? ??????? ??????? ?? ??????? ??????. ?? ???? ??? ????? ??? ????? ?????, ??? ????? ????? ?????? ?????? ?????. ???? ????? ???????, ????? ??????? ?? ?? ??????? ?????? ??????? ??????? ????? ????? ?? ??????? ?????? ??? ?? ?????? ?????? ???????? ????? ????? ???? ????? ?????? ?????.

"???? ????? ????? ????? ????? ???? ?????? ?? ?????? ????? ??? ?????? ??????? ???? ???????? ???????? ?????, ?????? ????? ?????? ????. ?? ?????? ??? ?? ??? ???? ???, ????, ?? ?????? ????? ???? ?? ????? ???? ?????? ?????? ?? ?????? ??? ?????? ??? ?????? ???? ???, ???? ??????? ?????? ????? ????? ????? ???????? ???? ????.

"?????, ??? ????? ????? ???? ?? ?????? ????? ????? ?????? ????? ????? ????? ????? ?????. ????? ?????? ???????? ??? ????? ?? ????. ?? ??? ????? ??? ???? ??????, ??????? ????? ???? ????? ???? ???? ?????, ????? ????? ???? ????? ????? ??? ???? ?????? ????? ????? ?????? ??? ????? ????? ????? ????? ????? ?? ????? ?????.

"???? ?? ??? ????? ????, ???? ???????, ????? ?????? ???? ?????? ?? ????? ??? ?????? ?? ????? ??? ???? ??????? ??????? ????? ?????. ????? ?????? ??? ???? ?????, ??? ???? ??????? ??????.

> "???? ?? ??? ????? ????, ???? ???????, ????? ?????? ???? ?????? ?? ????? ??? ?????? ?? ????? ??? ???? ??????? ??????? ????? ?????"

???? ????? ?????? ?? ????? ????? ????? ?? ?? ????? ?????, ?? ????? ?????? ??? ???? ?? ???? ?????. "???? ?????? ?? ??????? ?????? ?? ????? ????????? ???? ????? ?????? ??? ??????. ???? ?????? ?? ??????, ????? ???? ????? ??? ??? ?????? ????? ??????? ?? ?????. ????? ??????? ?? ?????? ?????? ?? ?????? ?????. ?????? ????? ?????? ????? ?????? ?????? ?? ???? ???? ????? ?? ??? ?????? ????? ??? ?? ???? ??????? ???? ???? ????. ?????? ?????? ????? ????? ?? ???? ?? ???? ?????? ???? ????? ???? ????. ?????? ?????? ???? ????, ?? ??? ?????? ????? ????? ????? ????? ?????? ??????? ?????, ???? ?????? ?????? ?????? ????? ?????? ????? ????? ????.

5
4

"???????? ?????? ?????? ?? ????? ?????? ????? ????? ?????? ??????? ????????? ??????? ?????? ?????, ??????? ????????? ?????? (?????), ?????? ???? ?????? ???? ??? ??? ????? ????? ????? ?????, ?????? ???? ??????? ?????? ??????? ????? ???????.

"??? ?????? ?? ??????? ????? ?????? ?????? ????? ??????? ??????? ?????? ???????, ????? ???? ??? ?? ???? ??, ????? ????? ?? ????? ??????, ????? ????? ?????? ??????, ????? ?????, ??????? ?????? ??????? ?????? ????? ?????? ?????? ??????? ???? ?????? ?? ?????? ?????? ???? ????? ?????? ????????? ?????? ???? ??????? ??????? ??????? ??????. **????? ?? ???, ???? ????? ????? ????? ????? ??????? ??? ?? ?????? ??? ????? ???? ?? ????? ???? ?? ????? ???? ???????".**