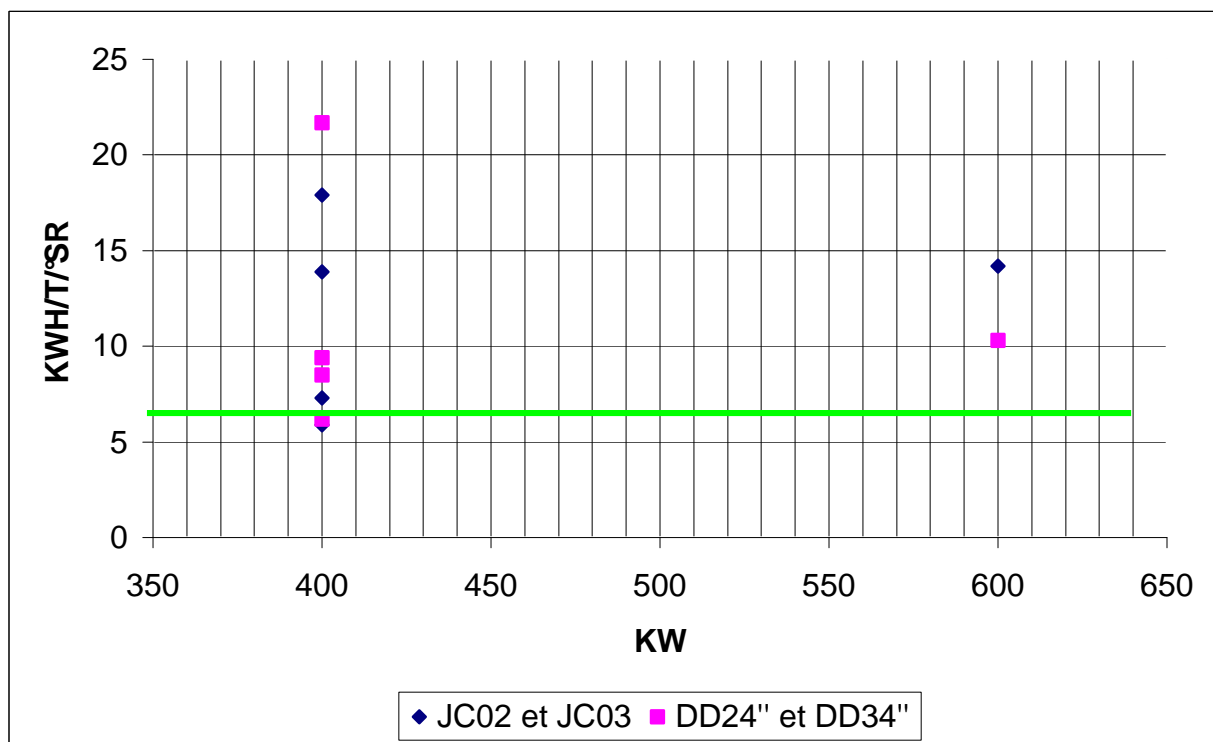


COMPARISON OF THE NET SPECIFIC ENERGY CONSUMPTION (KWH/T/°SR) BETWEEN CONICAL REFINERS JC02-JC03 AND DOUBLE-DISC REFINERS

In 2005, 21 conical refiners only have been diagnosed and this is not enough to establish reliable statistics. Nevertheless, we have decided to compare 4 JC02 refiners with 4 refiners DD24" and 1 JC03 refiner with 1 DD34" refiner in the same plant. The fibrous composition and the level of production were the same in both cases. (The net specific energy consumption from our pilot refiner was 6 KWH/T/°SR) .



CONCLUSIONS

- 1° We have similar dispersions of values with conical and double-disc refiners but surely not for the same reasons.
- 2° The trend to have higher levels of net specific energy consumption with big refiners is also valid for conical refiners.
- 3° Conical refiners are not better than double-disc refiners and reciprocally.
- 4° The choice of the refiner type lies on some production criteria.
- 5° A conical refiner is hydraulically more stable than a double-disc refiner. Its pumping characteristic is more flat.
- 6° The trigonometric parameters of disc patterns are much more sensitive than the relevant ones for a conical refiner, thus the potential of paper characteristics is a bit higher with double-disc refiners.