

**Dust, NOx reduction technology creation
by the development of highly efficient combustion booster
for industrial boiler and heavy oil dispersant**

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- Participant company : TECHNOBIO

Conclusion of year 1 (Result summary)

1. Analysis/ assessment of the element contributing to intermediate dust creation
 - Asphaltene content analysis for each sample heavy oil & estimation of Asphaltene dispersion by additive (A)
2. Target additive range setting for dispersion and combustion boosting of Asphaltene & sludge
3. Installation of test boiler system and dust measuring instrument
 - Boiler system with 1.5Ton/Hr steam emission capa.
4. Around 25% of dust decrease achieved by additive (A)
5. Thermal efficiency increase : around 2%
 - Need to identify soot adhesion on the heating surface and thermal efficiency mechanism through future long-term combustion test.
6. It seems to be possible to reduce 30~40% of dust & 20% of NOx and to save 1~3% of fuel by development tests of dispersant and combustion booster and application tests of heavy oil combustion boiler.