GTAnalysis

# CycleDeck©

# A Gas Turbine Simulation Program

## A First Principle Thermodynamic Model

## OEMs Use Models, Why Shouldn't You!

GTModel - 7x04.mdl

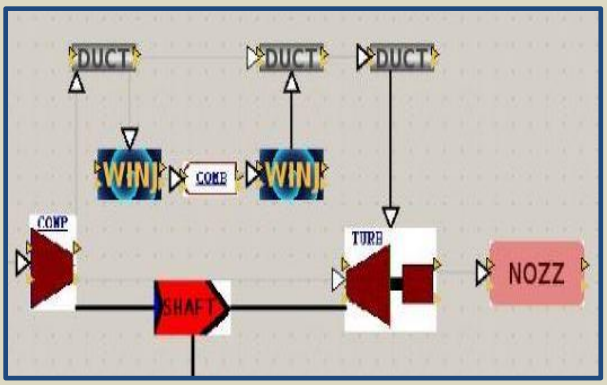
File Edit View Config Help Description

MAIN | Detail View | Model Results | INLT0 | COMP0 | DUC

f(x)

| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | | Design-Point | Off-Design 1 | Off-Design 2 | Off-Design 3 |
| 2 | | ☑ | ☑ | ☑ | ☑ |
| 3 | **Summary** | | | | |
| 4 | gross_output | 174568.1 | 164521.28 | 162068.48 | 156767.66 |
| 5 | gross_heat_rate | 7804.98 | 8303.22 | 8191.09 | 7999.88 |
| 6 | fuel_flow_sum | 63327.97 | 63493.21 | 61701.98 | 58290.59 |
| 7 | gen_losses | 3611.01 | 3447.11 | 3408.18 | 3325.5 |
| 8 | net_heat_rate | 7969.84 | 8480.92 | 8367.05 | 8173.26 |
| 9 | hhv | 23870.89 | 23870.89 | 23870.89 | 23870.89 |
| 10 | net_output | 170957.09 | 161074.16 | 158660.3 | 153442.16 |
| 11 | power_factor | 0.85 | 0.85 | 0.85 | 0.85 |
| 12 | lhv | 21515.0 | 21515.0 | 21515.0 | 21515.0 |
| 13 | air_flow | 959.81 | 959.81 | 959.81 | 959.81 |

User friendly Excel format.




Graphical model building interface.

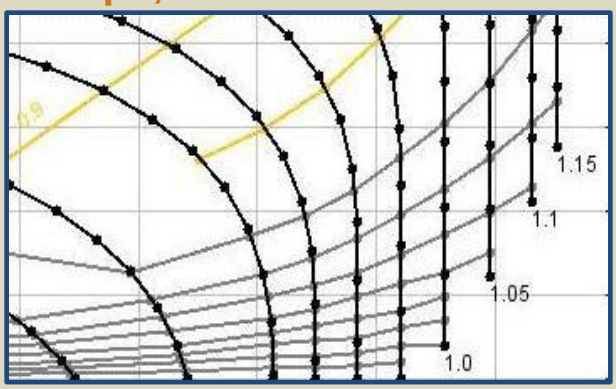
## Applications

- Gas Turbine or Combined Cycle.
- Match to turbine's specific health.
- Integrates Control Scheduling.
- Conduct "What If" Studies.
- Base and Part Load Capable.

## Benefits

- Off-design Models.
- Predict Performance.
- Vary Ambient Operation.
- Days Ahead Fuel Purchases.
- Dispatch Generation Tool.
- Emissions Credit Predictions.
- Compressor and Turbine Mapping Functionality.

## Uses Maps, NOT Correction Curves!




**Correction Curves are ineffective due to uncertainty, hardware changes, performance changes and variance in reference conditions.**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