	Geometry:		**Physics:**

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PROCESS Version -->	1.0.17	
Date: -->	18/03/2020	
Time: -->	09:55	
User: -->	apearce	
Optimising: -->	Plasma major radius	

Geometry:

R_0	= 17.53 m
a	= 5.656 m
A	= 3.1
κ_{95}	= 1.65
δ_{95}	= 0.3333
Surface area	= 5458 m^2
Plasma volume	= 1.861e+04 m^3
No. of TF coils	= 16
inboard blanket+shield	= 1.055 m
ouboard blanket+shield	= 1.782 m
Fusion power	= 2738 MW

Plasma composition:
Number densities relative to electron density:

D + T	= 0.8931
He	= 0.05223
Xe	= 1e-08
W	= 5e-05

Colour Legend:
ITR
OP

Physics:

I_p	= 38.81 MA
Vacuum B_T at R_0	= 5.918 T
q_{95}	= 3.5
β_N, thermal	= 0.6243 % m T MA^{-1}
β_N, total	= 0.6965 % m T MA^{-1}
β_P, thermal	= 0.2849
β_P, total	= 0.3178
$< t_e >$	= 6.769 keV
$< n_e >$	= 3.454e+19 m^{-3}
$< n_{e,line} > / n_G$	= 1.192
$T_{e0} / < T_e >$	= 2.45
$n_{e0} / < n_{e,vol} >$	= 2
Z_{eff}	= 1.225
$n_Z / < n_{e,vol} >$	= 5.001e-05
τ_e	= 6.919 s
H-factor	= 1.13
Scaling law	= ITER-96P

Coil currents etc:

PF 1	= 21.77 MA
PF 3	= -13.83 MA
PF 5	= -8.02 MA
Startup flux swing	= 1484 Wb
Available flux swing	= -1935 Wb
Burn time	= 2 hrs

TF coil type is WST Nb3Sn

Peak field at conductor (w. rip.)	= 13.05 T
I/I_{crit}	= 0.6017
TF Temperature margin	=ERROR! Var missing
CS Temperature margin	= 5.159 K
Conduit Von Mises stress	=ERROR! Var missing
Case Von Mises stress	=ERROR! Var missing
Allowable stress	= 5.8e+08 Pa
Mass per TF coil	= 1.052e+07 kg

Power flows:

Nominal neutron wall load	= 0.369 MW m^{-2}
Normalised radius of 'core' region	= 0.75
No pedestal model used	
Helium fraction	= 0.05223
Core radiation	= 167.2 MW
Total radiation	= 289 MW
Nuclear heating in blanket	= 1606 MW
Nuclear heating in shield	= 4.743 MW
Power to divertor	= 295.7 MW
H-mode threshold	= 295.7 MW
Divertor life	= 3.569 years
Primary (high grade) heat	= 3594 MW
Gross cycle efficiency	= 37.5 %
Net cycle efficiency	= 31.55 %
Gross electric power	= 1348 MW
Net electric power	= 500 MW
Fusion-to-electric efficiency $\frac{P_{e,net}}{P_{fus}}$	= 18.26 %

Electron Cyclotron Current Drive:

Steady state auxiliary power	= 61.38 MW
Power for heating only	= 0.001 MW
Bootstrap fraction	= 0.1278
Auxiliary fraction	= 0.07835
Inductive fraction	= 0.7938
Plasma heating used for H factor	= 417.5 MW
$\frac{P_{div}}{R_0}$	= 16.87 MW m^{-1}
$\frac{P_{div}}{< n > R_0}$	= 48.84 ×10^{-20} MW m^2
$\frac{P_{div}}{P_{LH}}$	= 1
H* (non-rad. corr.)	= 0.9986

Costs

Cost of electricity	=ERROR! Var missing