Per your request I obtained the data you need for the economic analysis. Here are the results of my calculations:

- **Reaction 1**: The reaction time is 39,600 s, the maximal liquid volume 1.585 m$^3$ and the maximal cooling load in the condenser 48.8 kJ/s. At the end of the reaction the volume is 1.558 m$^3$ and the temperature 378 K.

- **Reaction 2**: The reaction takes 14,627 s. 3120.9 mols of methanol are needed for the reaction. The inlet volume is 1.615 m$^3$ and the outlet volume 1.560 m$^3$.

- **Distillation 1**: The simulated distillation time (from moment of first draw until temperature constraint) is 15,719 s. The distillation overhead consists of 1412.3 mols methanol, 1496.4 mols R1, 6420.2 mols toluene, 6.37 mols E and 3.67 mols A.

- **Distillation 2**: The simulated distillation time (from moment of vacuum initiation until temperature constraint) is 6391 s. The distillation residue (bottom) consists of 0.10 mols active catalyst, 24.90 mols deactivated catalyst, 1.005 mols I$_2$, and 64.30 mols A.

- **Reaction 3**: The reaction time is 17,112 s and 51068 mols water are needed. The inlet volume is 1.659 m$^3$ and the outlet volume 1.820 m$^3$.

- **Distillation 3**: The simulated distillation time (from moment of first draw until purity constraint) is 89,301 s. The distillation overhead (top) consists of 1446.9 mols methanol, 873.7 mols toluene, 255.3 mols E, 216.4 mols A, and 50345 mols water. The pot fulfills the purity specification with 723.5 mols D, 1982.2 mols A, and 86.06 mols toluene.