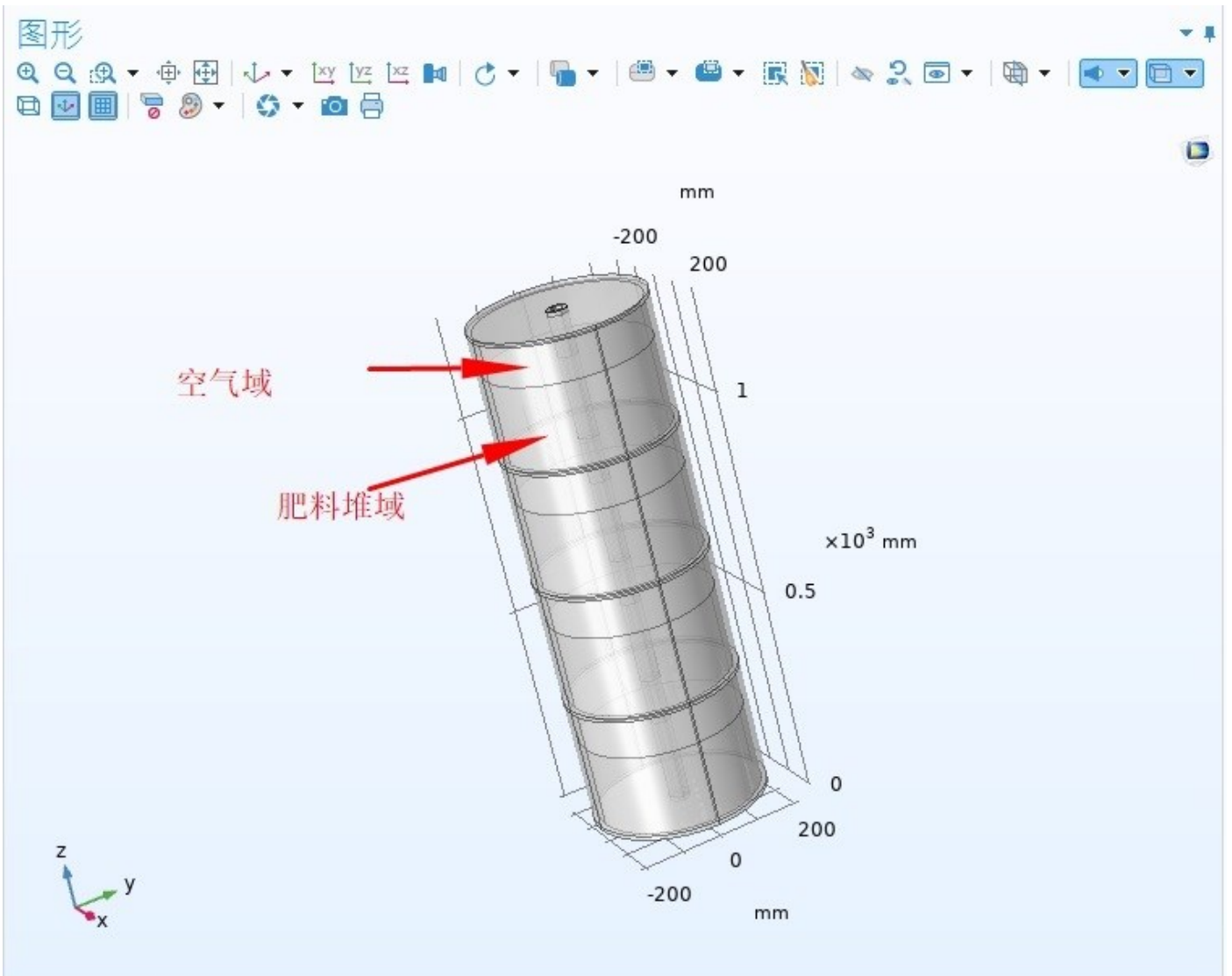


Fig1



进度 日志 空气堆平均温度 ×



1.4 GB | 1.31 GB

Fig2

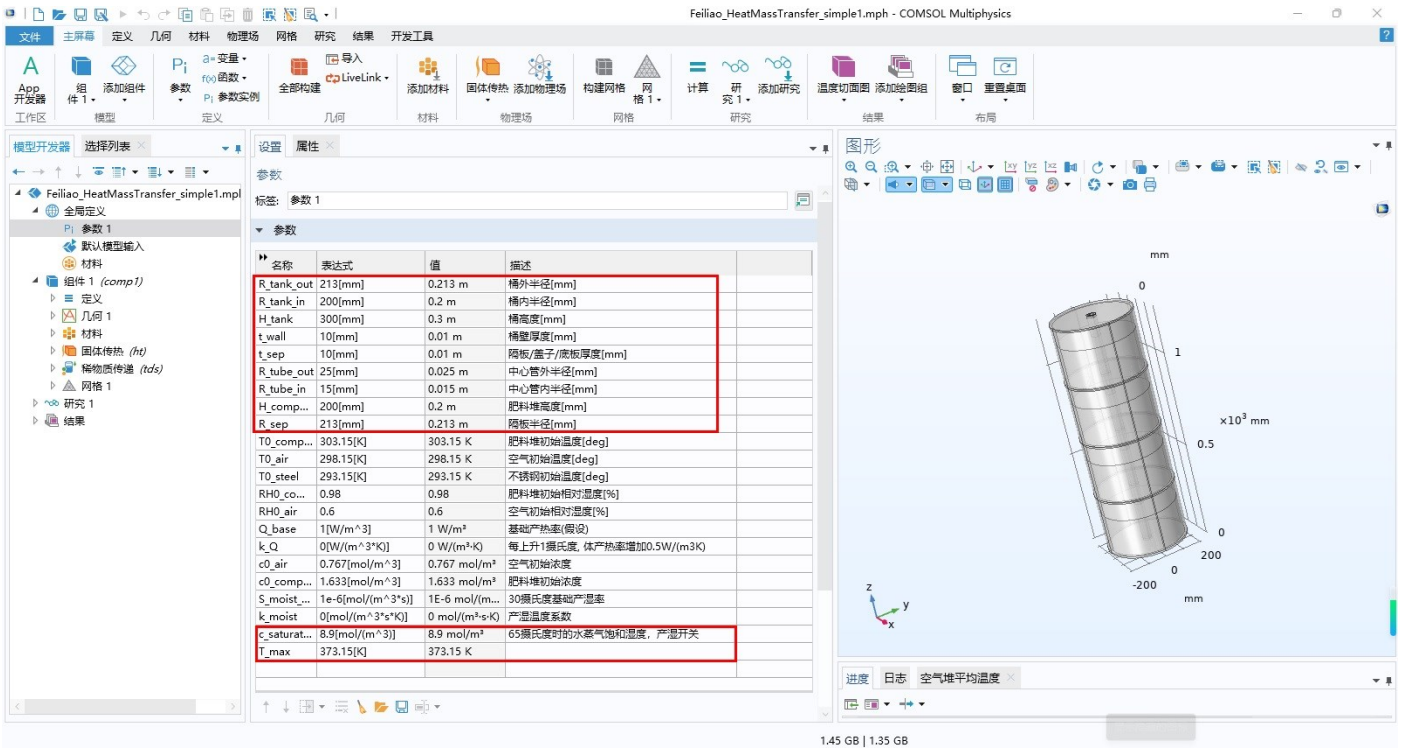


Fig3

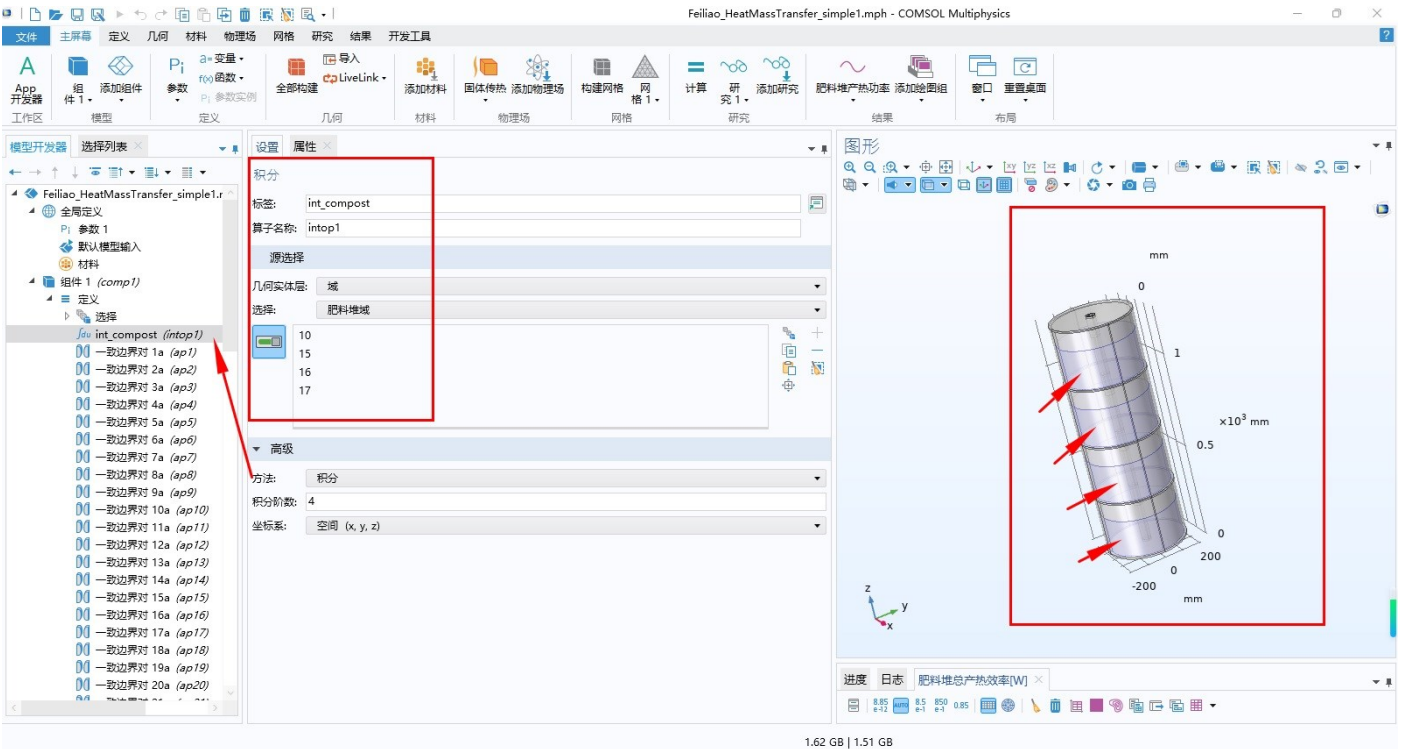


Fig4

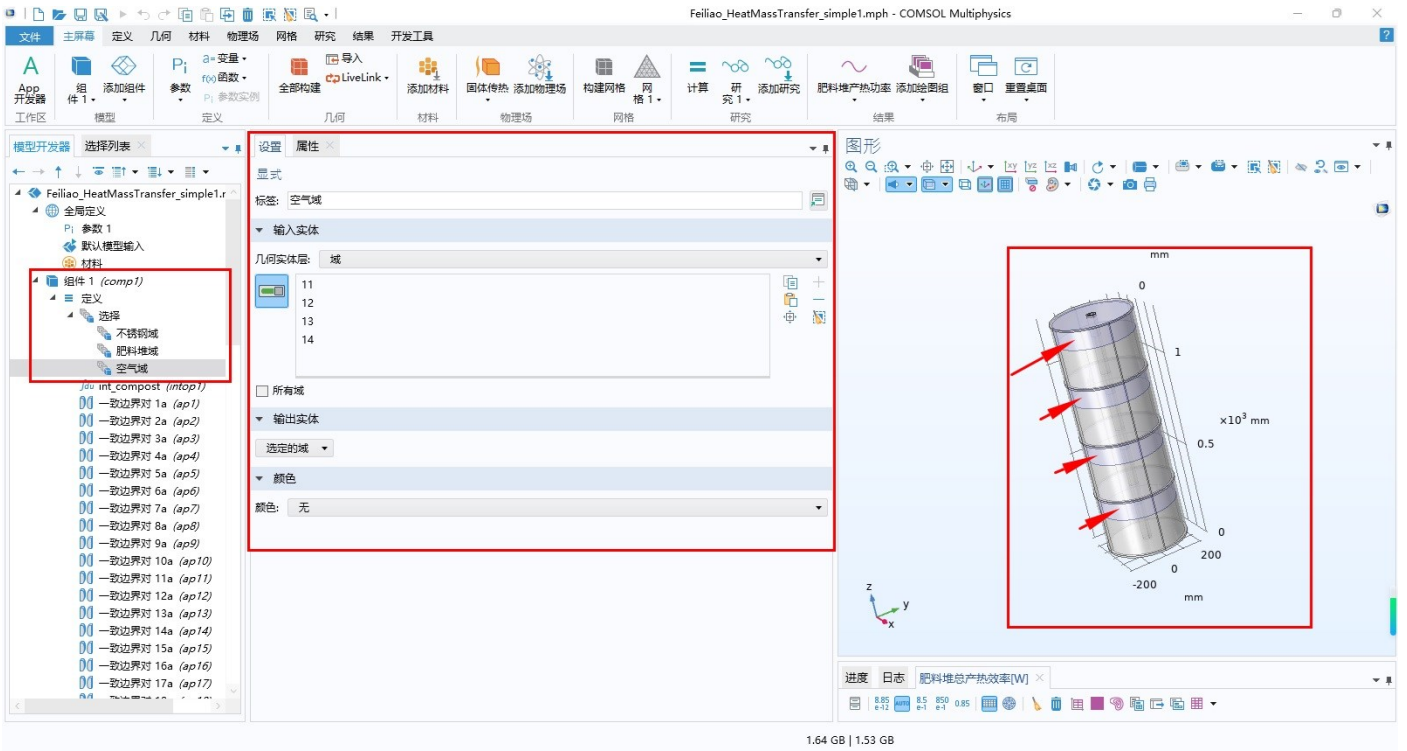


Fig5

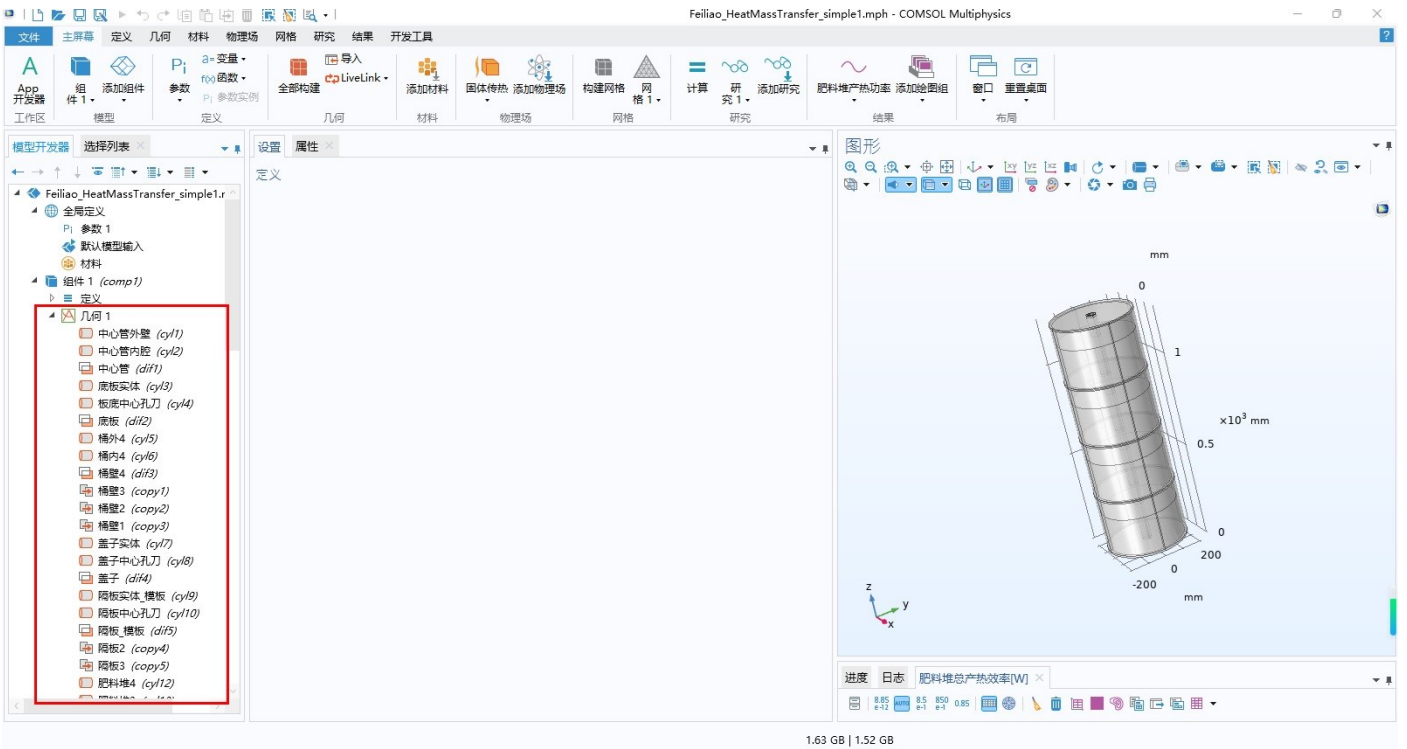


Fig6

The screenshot shows the COMSOL Multiphysics interface for a model named 'Feiliao_HeatMassTransfer_simple1.mph'. The 'Properties' window is open for the 'Compost' material, showing the following material property details:

属性	变量	值	单位	属性组
密度	rho	546	kg/m ³	基本
导热系数	k_iso ; k...	0.3	W/(m·K)	基本
恒压热容	Cp	3200	J/(kg·K)	基本
孔隙率	epsilon	0.34	1	基本
渗透率	kappa_i...	1e-7	m ²	基本
含水量	w_c	0.2	kg/m ³	基本

The 'Geometry Selection' window shows the 'Fertilizer Domain' (肥料堆域) selected for the material. The 3D model on the right shows a cylindrical barrel with dimensions in mm, with a vertical scale of $\times 10^3$ mm.

1.65 GB | 1.54 GB

Fig7

The screenshot shows the 'Heat Source' (热源) settings for the 'Fertilizer Domain' (肥料堆域). The 'Heat Source' is set to 'User Defined' (用户定义) with the following equation:

$$Q_{base} + k \cdot Q^*(T - T_{0_compost})$$

The units are specified as W/m^3 . The 'Material Type' (材料类型) is set to 'Solid' (固体). The 'Heat Source' (热源) is set to 'Volume Source' (广义源). The 'Equation' (方程) section is currently empty.

1.64 GB | 1.54 GB

Fig8

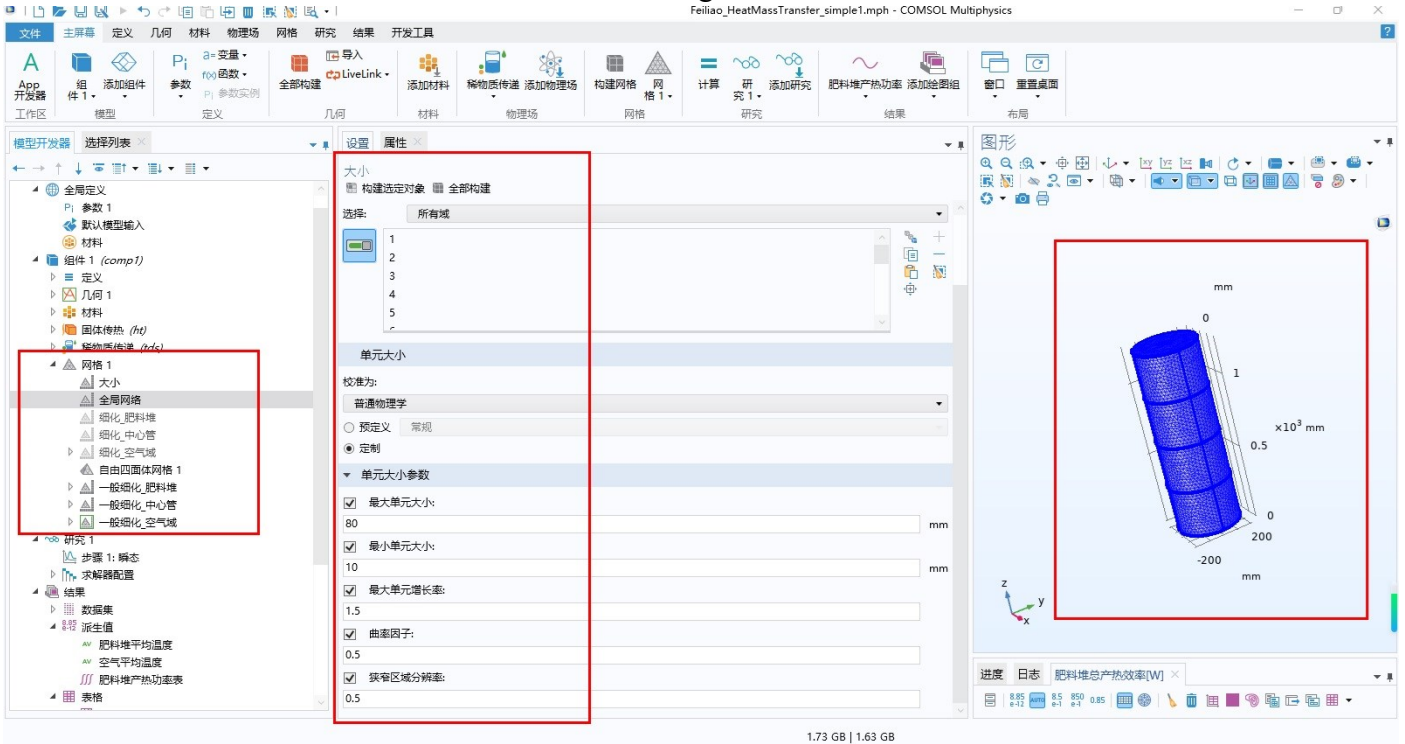


Fig9

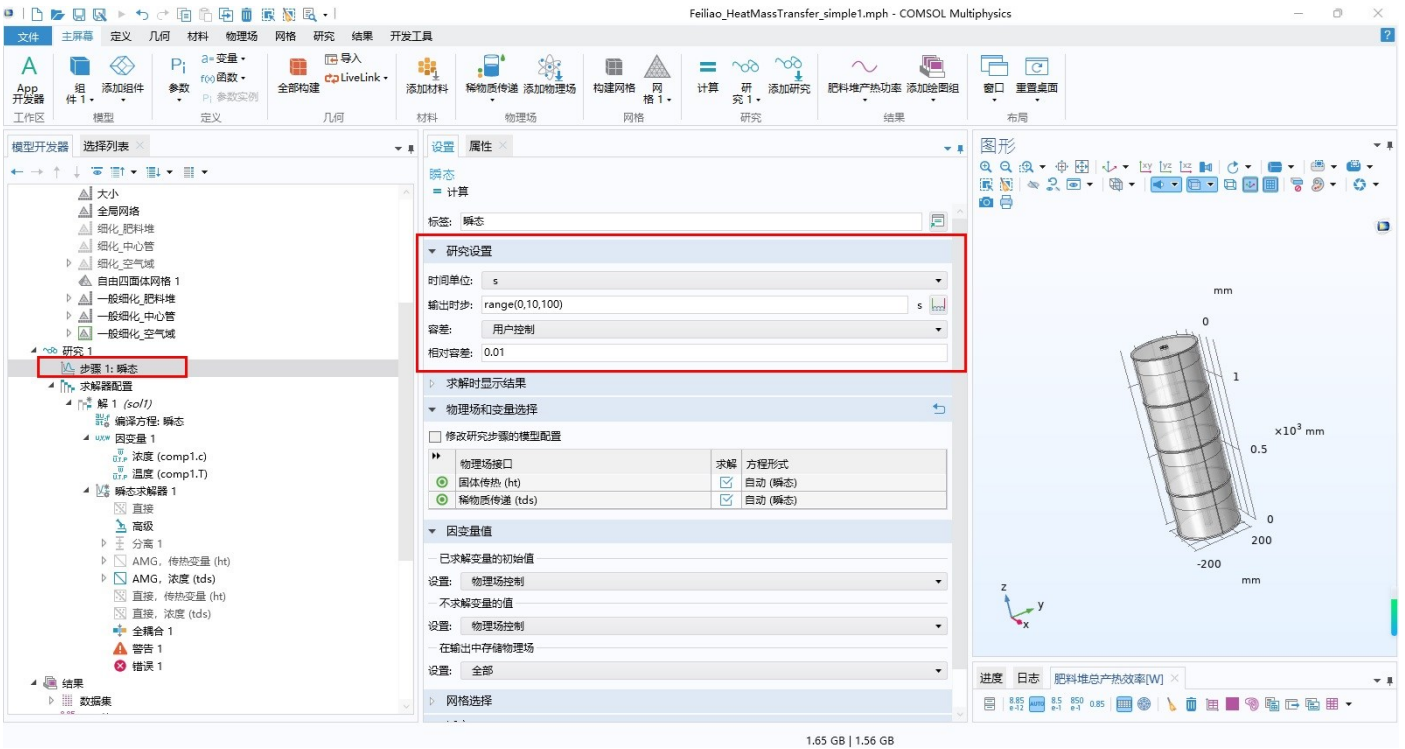


Fig10

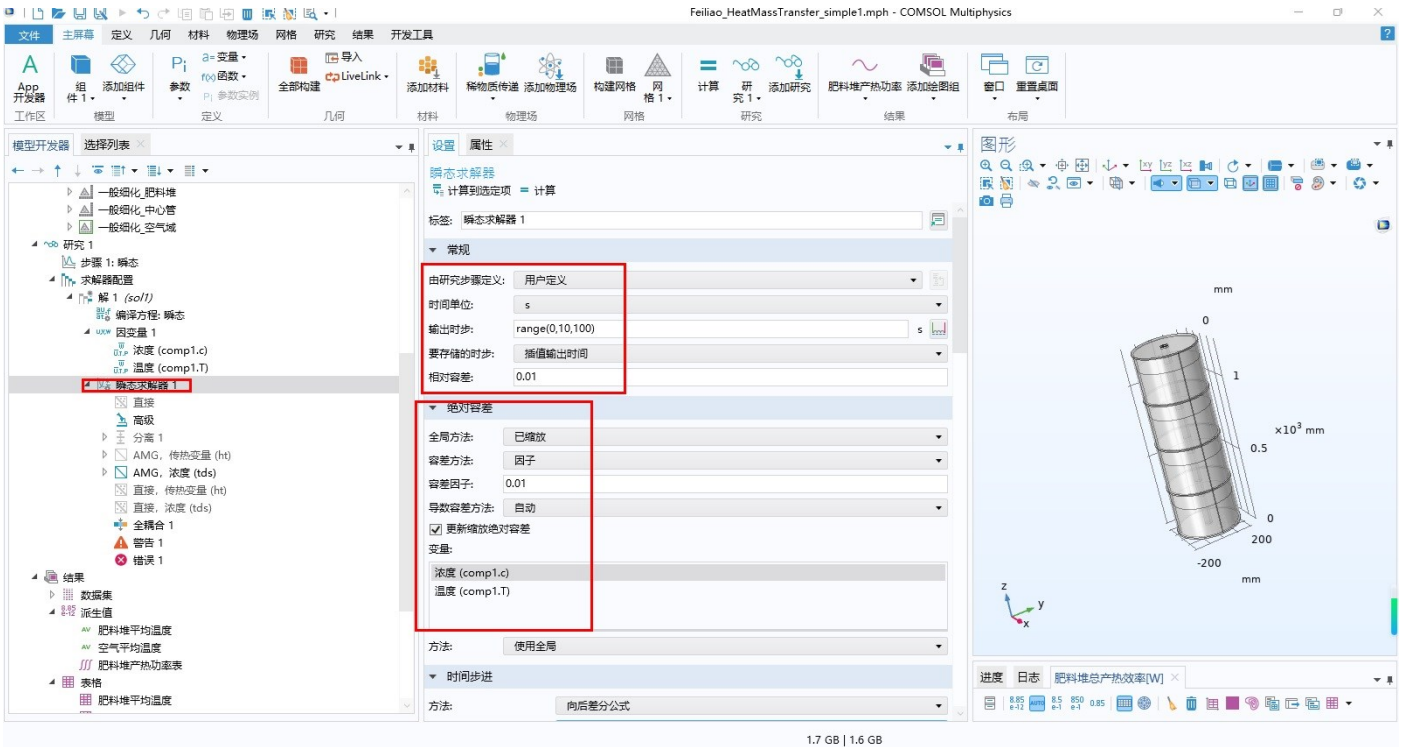


Fig11

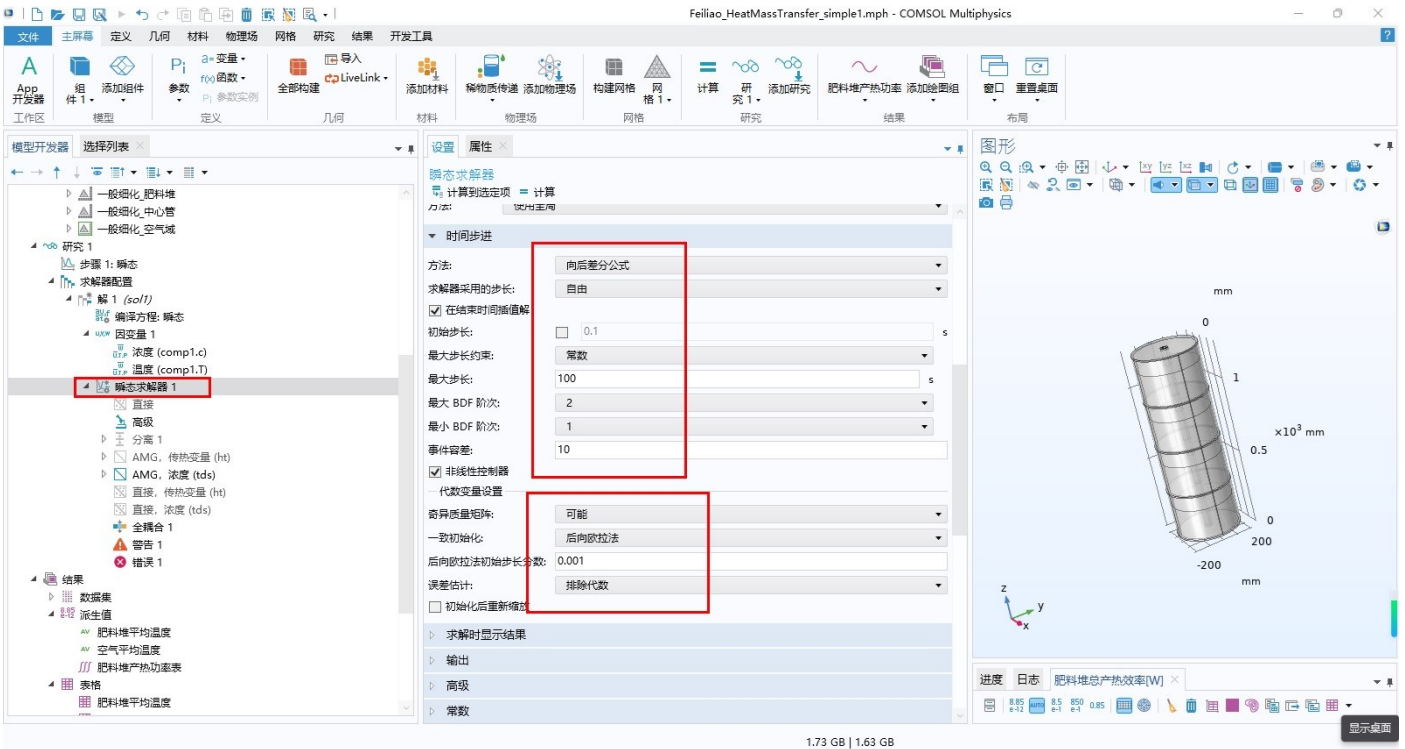


Fig12

The image shows the COMSOL Multiphysics software interface for a simulation titled "Feiliao_HeatMassTransfer_simple1.mph". The interface is divided into several main sections:

- Model Builder (模型开发器):** Located on the left, it shows a hierarchical tree of the model. The "Study 1" (研究 1) folder is expanded to show "Solver Configuration" (求解器配置) and "Solution 1" (解 1). The "Full Coupling 1" (全耦合 1) node is highlighted with a red box.
- Settings (设置) - Properties (属性):** The central panel displays the configuration for the selected "Full Coupling 1" node. Several fields are highlighted with red boxes:
 - Linear Solver (线性求解器):** Set to "AMG, 浓度 (tds)".
 - Nonlinear Method (非线性方法):** Set to "Automatic (Newton)" (自动 (牛顿)).
 - Initial Damping Coefficient (初始阻尼系数):** Set to 1.
 - Minimum Damping Coefficient (最小阻尼系数):** Set to 1E-4.
 - Update Step Limit (更新步长的限制):** Set to 10.
 - Step Growth Limit (步长增长的限制):** Set to 1.
 - Use Recovery Damping Coefficient (使用恢复阻尼系数):** Set to "Automatic" (自动).
 - Recovery Damping Coefficient (恢复阻尼系数):** Set to 0.75.
 - Stopping Technique (终止技术):** Set to "Residual" (容差).
 - Maximum Iterations (最大迭代次数):** Set to 4.
 - Convergence Factor (容差因子):** Set to 1.
 - Stopping Criterion (终止准则):** Set to "Solve" (解).
- Graphics (图形):** On the right, a 3D model of a cylinder is shown. The cylinder has a height of 200 mm and a diameter of 200 mm. The z-axis is vertical, ranging from 0 to 200 mm. The x and y axes are horizontal, ranging from -200 to 200 mm. A scale factor of $\times 10^3$ mm is indicated.
- Bottom Panel:** Shows the "Progress" (进度) and "Log" (日志) tabs. The progress bar is at 0.85. The log window shows "肥料堆总产热效率[W]" (Fertilizer pile total heat production efficiency [W]).

At the bottom of the window, the system memory usage is displayed as "1.71 GB | 1.62 GB".