

Seminar One

DX

XJTU

2018 年 10 月 26 日

- 1 Topic One
 - Converter Valve
- 2 Electromagnetic Field
 - Maxwell
 - Transmission Line
- 3 third section

1 Topic One

2 Electromagnetic Field

3 third section

1 Topic One

■ Converter Valve

2 Electromagnetic Field

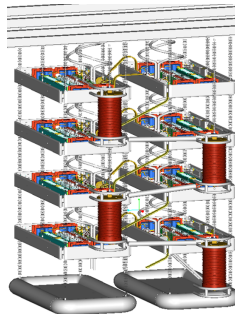
■ Maxwell

■ Transmission Line

3 third section



(a) Real Image



(b) Structure

图: Converter Valve

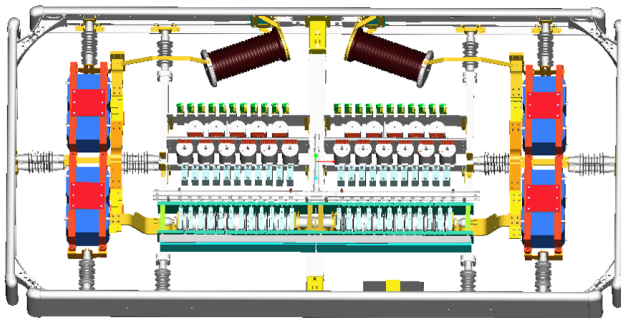


图: Layer

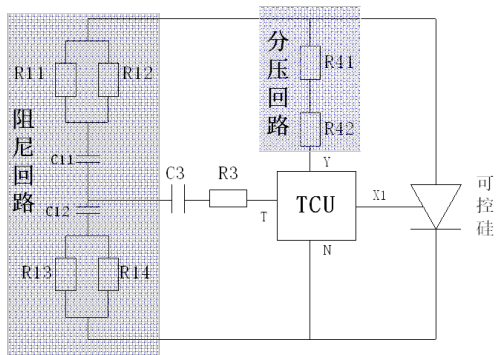


图: Basic Circuit

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Maxwell Equation

$$\oint_l \vec{H} \cdot d\vec{l} = \int_S \vec{J} \cdot d\vec{S} + \int_S \frac{\partial \vec{D}}{\partial t} \cdot d\vec{S}$$

$$\oint_l \vec{E} \cdot d\vec{l} = - \int_S \frac{\partial \vec{B}}{\partial t} \cdot d\vec{S}$$

$$\oint_S \vec{B} \cdot d\vec{S} = 0$$

$$\oint_S \vec{D} \cdot d\vec{S} = q$$

关系

$\vec{D} = \epsilon \vec{E} \Rightarrow$ 类似电容的关系

$\vec{B} = \mu \vec{H} \Rightarrow$ 类似电感的关系

$\vec{J} = \gamma \vec{E} \Rightarrow$ 类似电阻的关系

1 Topic One

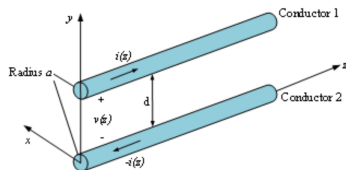
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Telegrapher's Equation



$$\begin{aligned} -\frac{\partial v(z, t)}{\partial z} &= R' i(z, t) + L' \frac{\partial i(z, t)}{\partial z} \\ -\frac{\partial i(z, t)}{\partial z} &= G' v(z, t) + C' \frac{\partial v(z, t)}{\partial z} \end{aligned}$$

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test information