

# CORROSION IN STEAM / WATER CYCLES

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# PROBLEM DEFINITION

**Current water source**  
TOC, types of contaminants

**Alternative water source**  
different TOC, different types

**Organic contamination**  
Quantitative: TOC (total organic carbon)  
Qualitative: type of organic contaminants

Filtration  
Evides

**Process water**  
± 3000 ppb TOC  
same TOC, but different types

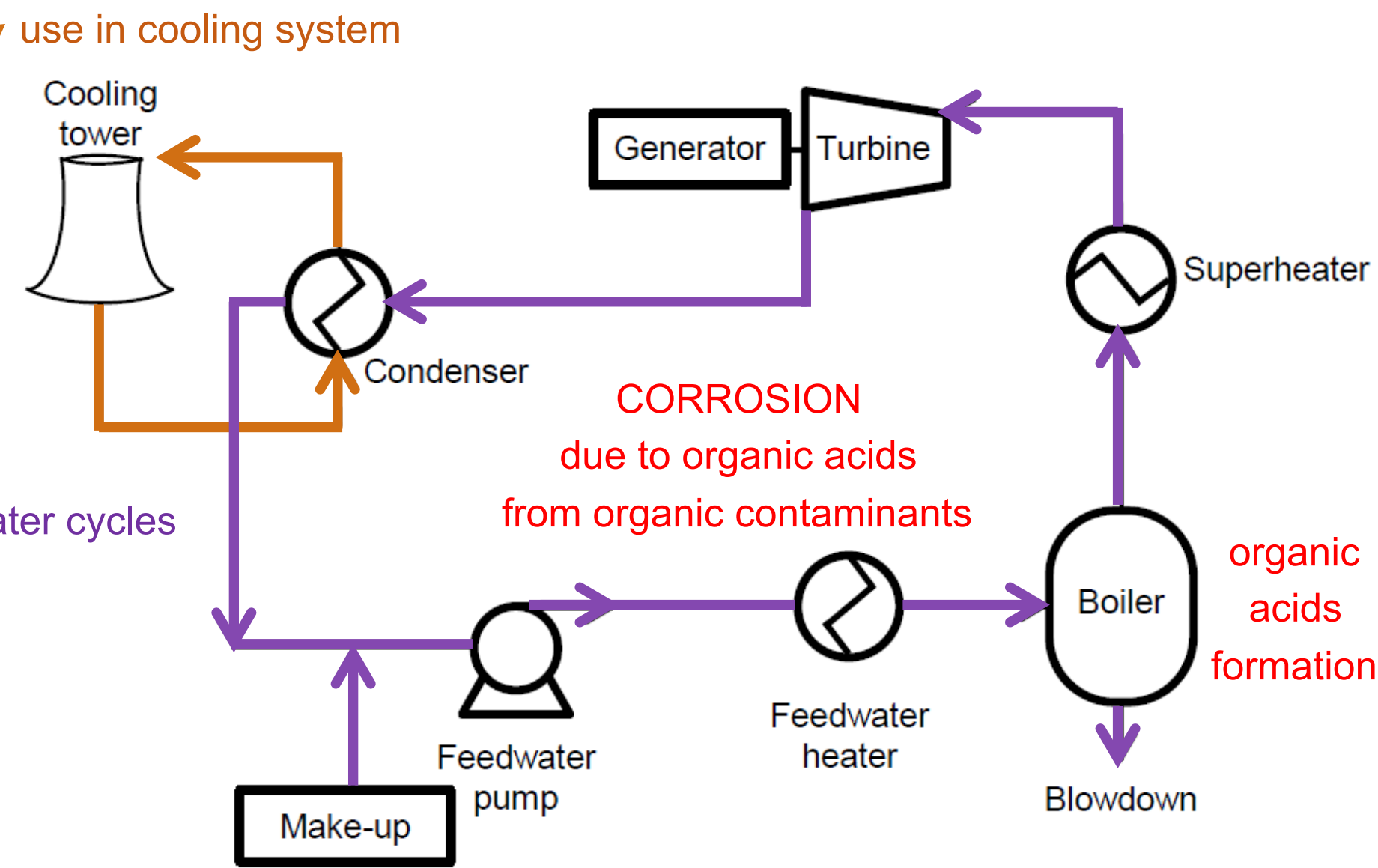
Conditioning  
IX, RO, MD...

**Demineralized water**  
± 50 ppb TOC  
different TOC, different types



Harmful? → testing

purification for steam/water cycles



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TOC, types of contaminants

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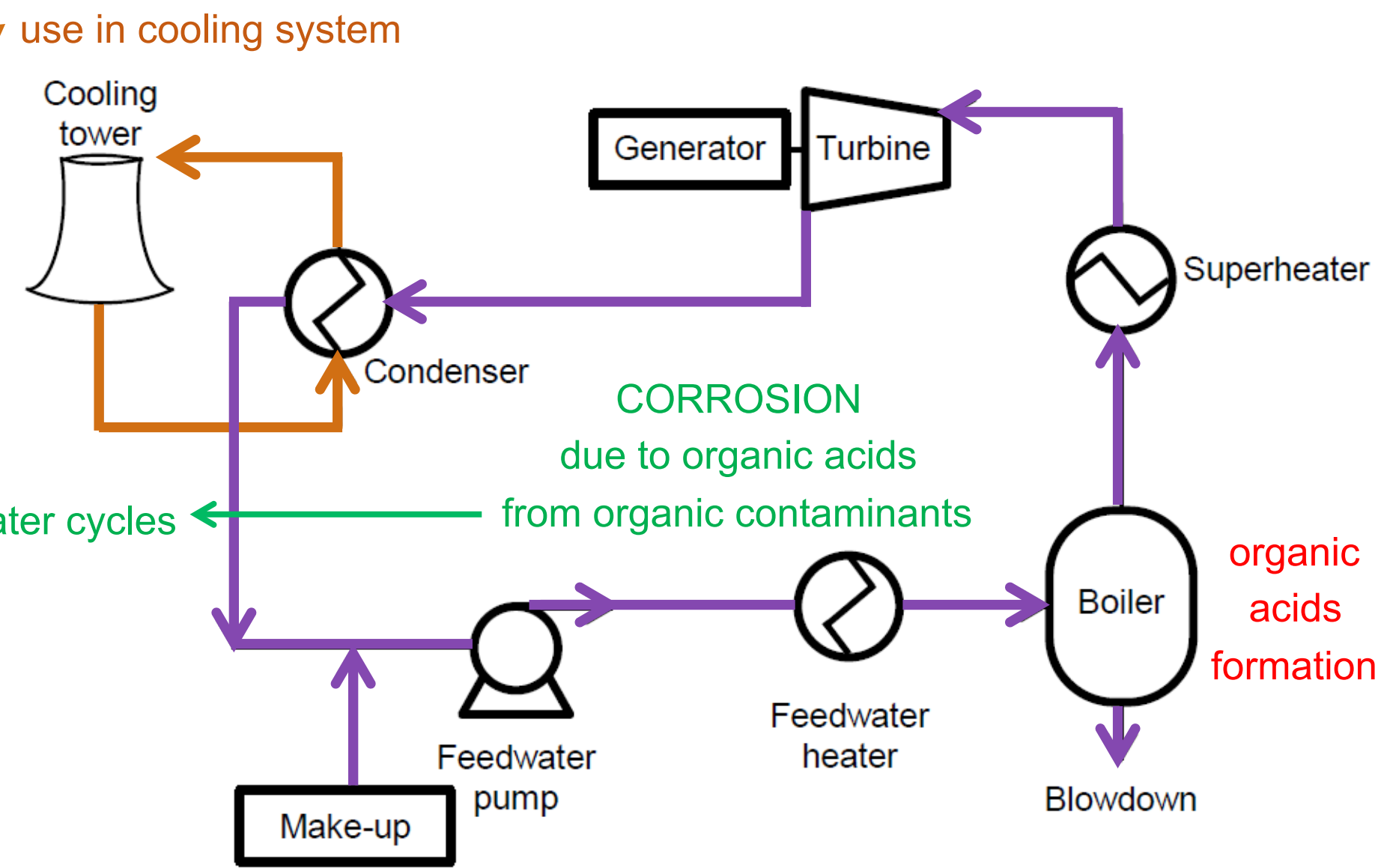
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Guidelines for appropriate  
corrosion prevention,  
water treatment and  
TOC specifications

Conditioning  
IX, RO, MD...

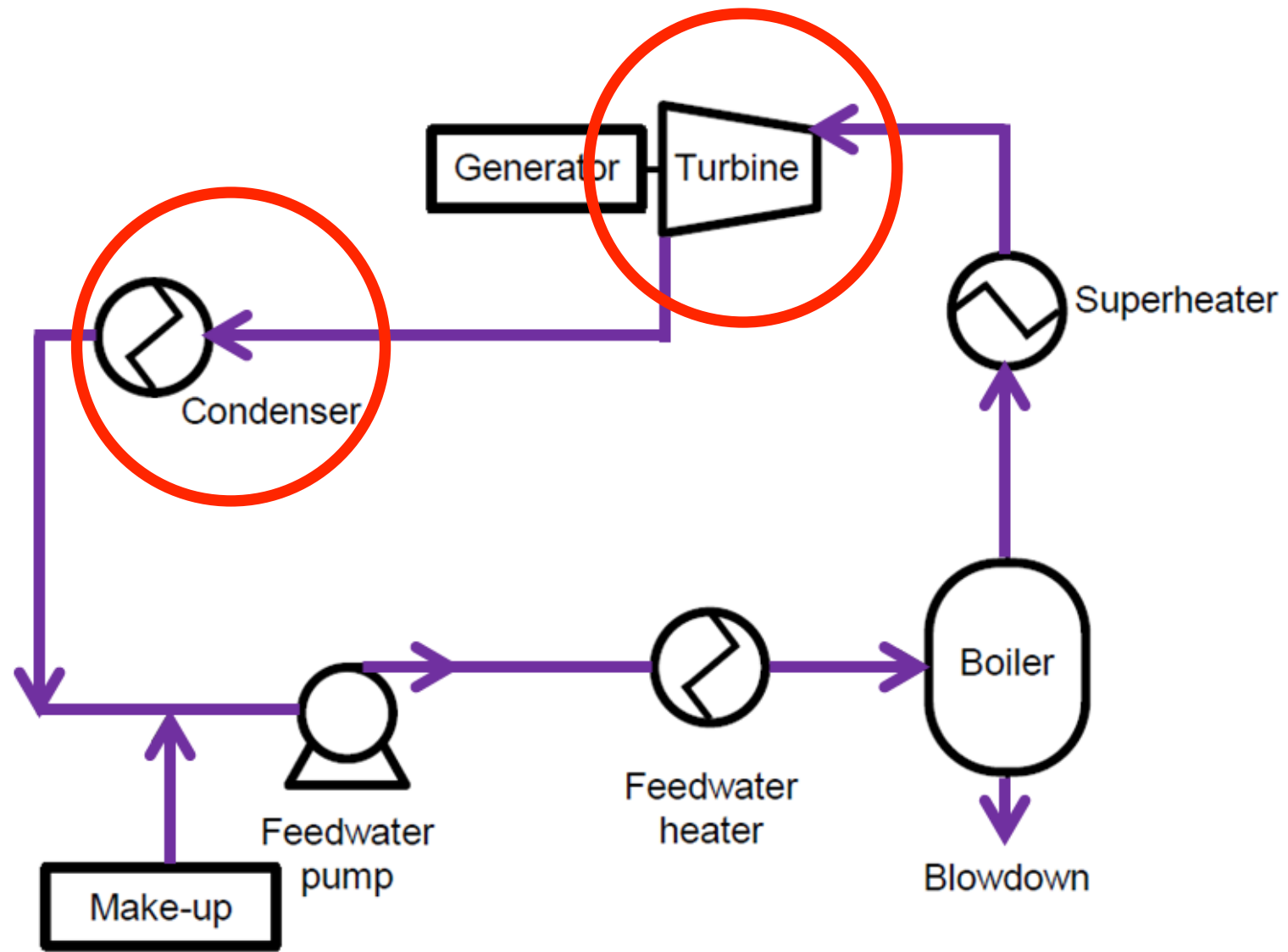
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# CORROSION ISSUES

Schematic representation  
**Steam/water cycle**



Thermodynamics  
**Rankine cycle**

