

## 蒸汽发生器给水系统中汽泡的形成与溃灭

@叶宏开\$清华大学工程力学系!北京 @王学芳\$清华大学工程力学系!北京 @吴立新\$清华大学工程力学系!北京  
@汤荣铭\$清华大学工程力学系!北京

收稿日期 1989-3-7 修回日期 网络版发布日期:

**摘要** 文章对蒸汽发生器给水系统中由于蒸汽泡的溃灭而造成的水锤现象作了分析。根据实验,用液面的波动、变质量水柱的加速运动和孤立蒸汽泡的溃灭等三个模型描述了汽泡的形成与溃灭。计算结果和国外某些核电站事故分析中的估算值相当接近。

**关键词** [核电站](#) [蒸汽发生器](#) [汽泡](#) [水锤](#)

分类号

## FORMING AND COLLAPSING OF STEAM BUBBLE IN FEED WATER PIPE OF STEAM GENERATOR

YE HONGKAI ; WANG XUEFANG; WU LIXIN; TANG RONGMING Department of Engineering Mechanics Tsinghua University, Beijing

**Abstract** According to the experiment, the waterhammer caused by steam bubble collapse in feed water pipe of steam generator are analysed. Three models (wave motion, accelerated motion of a water body with variable mass, dynamics of the single bubble) are used to describe and calculate the formation and collapse of the bubble. The results are coincided with that estimated in accident analysis of some nuclear power plant in abroad.

**Key words** [Nuclear power plant](#) [Steam generator](#) [Steam bubble](#) [Waterhammer](#)

DOI

通讯作者

### 扩展功能

#### 本文信息

- ▶ [Supporting info](#)
- ▶ [\[PDF全文\]\(540KB\)](#)
- ▶ [\[HTML全文\]\(0KB\)](#)
- ▶ [参考文献](#)

#### 服务与反馈

- ▶ [把本文推荐给朋友](#)
- ▶ [文章反馈](#)
- ▶ [浏览反馈信息](#)

#### 相关信息

- ▶ [本刊中包含“核电站”的相关文章](#)
- ▶ [本文作者相关文章](#)