The Code Modifications for RELAP5/MOD3.3/K

1. **Introduction for RELAP5/MOD3.3/K**

2. **Code Modifications**

TS

3. **Conclusion**

1. Introduction for RELAP5/MOD3.3

1.1 Code Selection for CAREM: RELAP5/MOD3.3

1.2 Code Characteristics of RELAP5/MOD3.3

- ✓ PSI reflood model was developed to improve quench front behavior during the reactor core reflood process.

- ✓ PSI reflood model was assessed against FLECHT-SEASET Test 31504 and 31701 during the developmental stage.

- ✓ FLECHT-SEASET tests have been demonstrated that improvements to the models in the code have strengthened the code's ability to calculate more accurately the thermal-hydraulic phenomenon associated with low and high rate reflood.

1. Introduction for RELAP5/MOD3.3/K

1.3 Findings of RELAP5/MOD3.3
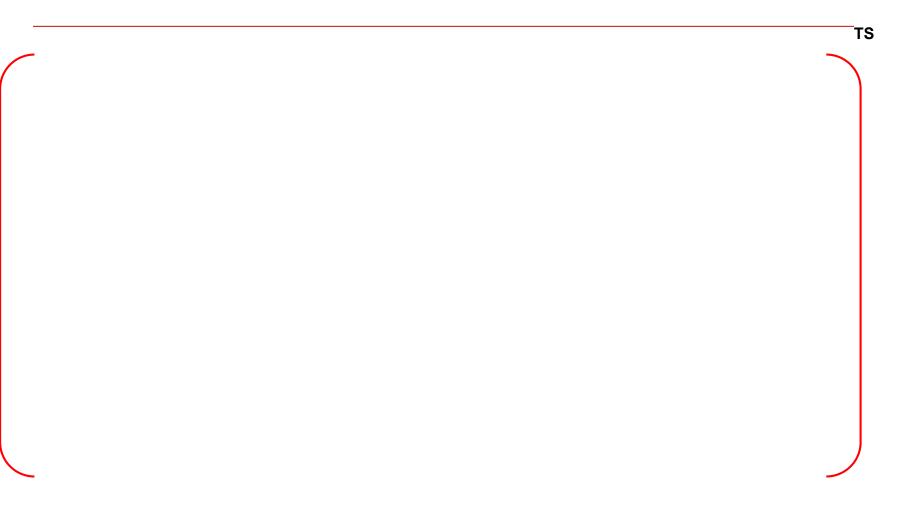
TS

APR1400−F−A−EC−17003−NP

2. Code Modifications

TS

2. Code Modifications

TS

2. Code Modifications

TS

2. Code Modifications

TS

APR1400−F−A−EC−17003−NP

2. Code Modifications

TS

2. Code Modifications

TS

2. Code Modifications

TS

APR1400−F−A−EC−17003−NP

2. Code Modifications

TS

APR1400−F−A−EC−17003−NP

2. Code Modifications

TS

2. Code Modifications

TS

APR1400−F−A−EC−17003−NP

2. Code Modifications

TS

2. Code Modifications

TS

2. Code Modifications

TS

2. Code Modifications

TS

APR1400-F-A-EC-17003-NP

2. Code Modifications

TS

APR1400-F-A-EC-17003-NP

2. Code Modifications

TS

APR1400−F−A−EC−17003−NP

2. Code Modifications

TS

APR1400−F−A−EC−17003−NP

2. Code Modifications

3. Conclusion

- ✓ In CAREM, RELAP5/MOD3.3 code is selected to calculate system thermal-hydraulic.

TS

- ✓ All the modifications have been incorporated into the modified RELAP5/MOD3.3, named RELAP5/MOD3.3/K, for a frozen code version.
- ✓ The validity of the modifications are confirmed through the assessment against SET, IET and Plant calculation.

Thank you for your attention

APR1400-F-A-EC-17003-NP