Load Items: Temperature Load

Functions

afx_msg VARIANT	**OSLoadUI::AddTemperatureLoad** (const VARIANT FAR &varElementNo, const VARIANT FAR &varTempAxialElong, const VARIANT FAR &varTempDiffTopAndBtm, const VARIANT FAR &varTemDiffSide) Adds TEMPERATURE LOAD to beam or plate elements.
afx_msg VARIANT	**OSLoadUI::AddStrainLoad** (const VARIANT FAR &varElementNo, const VARIANT FAR &varAxialElong) Adds STRAIN LOAD to beam or plate elements.

Detailed Description

These functions are related to temperature load(s) including load generated by temperature change and by strain change.

Function Documentation

◆ AddStrainLoad()

VARIANT OSLoadUI::AddStrainLoad (const VARIANT FAR & varElementNo,
const VARIANT FAR & varAxialElong)

Adds STRAIN LOAD to beam or plate elements.

Parameters

[in] **varElementNo** Element number ID(s).

[in] **varAxialElong** Initial axial elongation (+)/ shrinkage (-) in member due to misfit, etc. For additional information, please refer to Section 5.32.6 of the Technical Reference manual.

Return values

0 OK.

-1 General error.

C++ Syntax

```
// Apply strain shrinkage of 5 units.
VARIANT RetVal = OSLoadUI::AddStrainLoad(varElementNo, -5.0);
```

VBA Syntax

```
' Apply strain shrinkage of 5 units.
Dim RetVal As VARIANT = OSLoadUI.AddStrainLoad(varElementNo, -5.0)
```

◆ AddTemperatureLoad()

```
VARIANT OSLoadUI::AddTemperatureLoad ( const VARIANT FAR & varElementNo,
                                       const VARIANT FAR & varTempAxialElong,
                                       const VARIANT FAR & varTempDiffTopAndBtm,
                                       const VARIANT FAR & varTemDiffSide )
```

Adds TEMPERATURE LOAD to beam or plate elements.

Parameters

[in] **varElementNo**	Element number ID(s) VARIANT array.
[in] **varTempAxialElong**	Change in temperature.
[in] **varTempDiffTopAndBtm**	Temperature difference from the top to the bottom of the element (for calculating bending).
[in] **varTemDiffSide**	Temperature difference from side to side of the element (local Z axis). For additional information, please refer to Section 5.32.6 of the Technical Reference manual.

Return values

0 OK.

-1 General error.

C++ Syntax

```
// Apply uniform temperature change of 5 units.
VARIANT RetVal = OSLoadUI::AddTemperatureLoad(varElementNo, 5.0, 0.0, 0.0);
```

VBA Syntax

```
' Apply uniform temperature change of 5 units.
Dim RetVal As VARIANT = OSLoadUI.AddTemperatureLoad(varElementNo, 5.0, 0.0, 0.0)
```