

Load Items: Nodal Load

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Functions

- afx_msg VARIANT **OSLoadUI::AddNodalLoad** (const VARIANT FAR &varNodeNos, const VARIANT FAR &varFX, const VARIANT FAR &varFY, const VARIANT FAR &varFZ, const VARIANT FAR &varMX, const VARIANT FAR &varMY, const VARIANT FAR &varMZ)
Adds JOINT LOAD to the specified node number or numbers.
- afx_msg VARIANT **OSLoadUI::AddSupportDisplacement** (const VARIANT FAR &varNodeNo, const VARIANT FAR &varDirection, const VARIANT FAR &varDispValue)
Adds SUPPORT DISPLACEMENT to node or nodes.
- afx_msg VARIANT **OSLoadUI::GetNodalLoadCount** (const VARIANT FAR &nNodeNo)
Get number of nodal loads present for the specified node.
- afx_msg VARIANT **OSLoadUI::GetNodalLoads** (const VARIANT FAR &nNodeNo, VARIANT FAR &varFX, VARIANT FAR &varFY, VARIANT FAR &varFZ, VARIANT FAR &varMX, VARIANT FAR &varMY, VARIANT FAR &varMZ)
Gets the nodal load(s) values for the specified node.
- afx_msg VARIANT **OSLoadUI::GetNodalLoadInfo** (const VARIANT FAR &varloadIndex, VARIANT FAR &varForce)
Gets nodal load(s) generated by specified load item in specified load case.

Detailed Description

These functions are related to nodal load including load on node and support displacement.

Function Documentation

◆ AddNodalLoad()

```
VARIANT OSLoadUI::AddNodalLoad ( const VARIANT FAR & varNodeNo,
                                const VARIANT FAR & varFX,
                                const VARIANT FAR & varFY,
                                const VARIANT FAR & varFZ,
                                const VARIANT FAR & varMX,
                                const VARIANT FAR & varMY,
                                const VARIANT FAR & varMZ )
```

Adds JOINT LOAD to the specified node number or numbers.

Parameters

- [in] **varNodeNo** Node number ID(s) VARIANT array.
- [in] **varFX** Force in X direction.
- [in] **varFY** Force in Y direction.
- [in] **varFZ** Force in Z direction.
- [in] **varMX** Moment in X direction.
- [in] **varMY** Moment in Y direction.
- [in] **varMZ** Moment in Z direction.

Return values

- 0** OK.
- 1** General error.
- 106** One dimensional array of long expected.
- 8004** Library Error: Unable to add self weight.
- 8005** Library Error: Unable to assign load.

C++ Syntax

```
// Add joint load of 2 units in X direction at node(s).
VARIANT RetVal = OSLoadUI::AddNodalLoad(varNodeNo, 2.0, 0.0, 0.0, 0.0, 0.0, 0.0);
```

VBA Syntax

```
' Add joint load of 2 units in X direction at node(s).
Dim RetVal As VARIANT = OSLoadUI.AddNodalLoad(varNodeNo, 2.0, 0.0, 0.0, 0.0, 0.0, 0.0)
```

See also

[OSLoadUI::GetNodalLoadCount](#)

[OSLoadUI::GetNodalLoads](#)

[OSLoadUI::GetNodalLoadInfo](#)

◆ AddSupportDisplacement()

```
VARIANT OSLoadUI::AddSupportDisplacement ( const VARIANT FAR & varNodeNo,
                                             const VARIANT FAR & varDirection,
                                             const VARIANT FAR & varDispValue )
```

Adds SUPPORT DISPLACEMENT to node or nodes.

Parameters

[in] **varNodeNo** Node number ID(s) VARIANT array.

[in] **varDirection** A number indicating direction: (= 1, 2, 3 for X, Y, Z direction, respectively).

[in] **varDispValue** Support displacement in given direction.

Return values

0 OK.

-1 General error.

C++ Syntax

```
// Add joint load of 2 units displacement to node(s) in global X
VARIANT RetVal = OSLoadUI::AddSupportDisplacement(varNodeNo, 1, 2.0);
```

VBA Syntax

```
' Add joint load of 2 units displacement to node(s) in global X
Dim RetVal As VARIANT = OSLoadUI.AddSupportDisplacement(varNodeNo, 1, 2.0)
```

◆ GetNodalLoadCount()

VARIANT OSLoadUI::GetNodalLoadCount (const VARIANT FAR & nNodeNo)

Get number of nodal loads present for the specified node.

Parameters

[in] **nNodeNo** The number of node(s).

Return values

<Val> The number of node(s).

-1 General error (perhaps load case not found).

C++ Syntax

```
// Gets the number of nodal loads applied at node #2.  
VARIANT nLoadItems = OSLoadUI::GetNodalLoadCount(2);
```

VBA Syntax

```
' Gets the number of nodal loads applied at node #2.  
Dim nLoadItems As VARIANT = OSLoadUI.GetNodalLoadCount(2)
```

See also

[OSLoadUI::AddNodalLoad](#)

[OSLoadUI::GetNodalLoads](#)

◆ GetNodalLoadInfo()

VARIANT OSLoadUI::GetNodalLoadInfo (const VARIANT FAR & varloadIndex,
 VARIANT FAR & varForce)

Gets nodal load(s) generated by specified load item in specified load case.

Parameters

[in] **loadIndex** Load item index.

[out] **varForce** Nodal force VARIANT array: 0 to 5 for FX, FY, FZ, MX, MY and MZ, respectively.

Return values

FALSE Failed

TRUE success

C++ Syntax

```
// Gets the nodal load(s) assigned with load #1 in Load Case #2.
long nEntities = OSLoadUI::GetNodalLoadInfo(1, &varForce);
```

VBA Syntax

```
' Gets the nodal load(s) assigned with load #1 in Load Case #2.
Dim nEntities As long = OSLoadUI.GetNodalLoadInfo(1, &varForce)
```

See also

[OSLoadUI::AddNodalLoad](#)

◆ GetNodalLoads()

```
VARIANT OSLoadUI::GetNodalLoads ( const VARIANT FAR & nNodeNo,
                                VARIANT FAR &    varFX,
                                VARIANT FAR &    varFY,
                                VARIANT FAR &    varFZ,
                                VARIANT FAR &    varMX,
                                VARIANT FAR &    varMY,
                                VARIANT FAR &    varMZ )
```

Gets the nodal load(s) values for the specified node.

Parameters

- [in] **nNodeNo** The node number ID.
- [out] **varFX** Force(s) in X direction (in VARIANT array).
- [out] **varFY** Force(s) in Y direction (in VARIANT array).
- [out] **varFZ** Force(s) in Z direction (in VARIANT array).
- [out] **varMX** Moment(s) about X direction (in VARIANT array).
- [out] **varMY** Moment(s) about Y direction (in VARIANT array).
- [out] **varMZ** Moment(s) about Z direction (in VARIANT array).

Return values

- 0 OK.
- 1 General error.

C++ Syntax

```
// Gets nodal loads items applied at node #2.
VARIANT Retval = OSLoadUI::GetNodalLoads(2, &varFX, &varFY, &varFZ, &varMX, &varMY,
&varMZ);
```

VBA Syntax

```
' Gets nodal loads items applied at node #2.
Dim RetVal As VARIANT = OSLoadUI.GetNodalLoads(2, &varFX, &varFY, &varFZ, &varMX, &varMY,
&varMZ)
```

See also

[OSLoadUI::AddNodalLoad](#)

[OSLoadUI::GetNodalLoadCount](#)