Result: Solids

Analysis Results

Functions

afx_msg VARIANT	**OSOutputUI::GetAllSolidNormalStresses** (const VARIANT FAR &nSolidNo, const VARIANT FAR &nCorner, const VARIANT FAR &nLC, VARIANT FAR &pdStresses) Returns all solid normal stresses.
afx_msg VARIANT	**OSOutputUI::GetAllSolidShearStresses** (const VARIANT FAR &nSolidNo, const VARIANT FAR &nCorner, const VARIANT FAR &nLC, VARIANT FAR &pdStresses) Returns all solid shear stresses.
afx_msg VARIANT	**OSOutputUI::GetAllSolidPrincipalStresses** (const VARIANT FAR &nSolidNo, const VARIANT FAR &nCorner, const VARIANT FAR &nLC, VARIANT FAR &pdStresses) Returns all solid principal stresses.
afx_msg VARIANT	**OSOutputUI::GetAllSolidVonMisesStresses** (const VARIANT FAR &nSolidNo, const VARIANT FAR &nCorner, const VARIANT FAR &nLC, VARIANT FAR &pdStresses) Returns all solid Von Mises stresses.

Detailed Description

These functions are related to output analysis solid results.

Function Documentation

◆ GetAllSolidNormalStresses()

VARIANT OSOutputUI::GetAllSolidNormalStresses (const VARIANT FAR & nSolidNo,
const VARIANT FAR & nCorner,
const VARIANT FAR & nLC,
VARIANT FAR & pdStresses)

Returns all solid normal stresses.

Parameters

[in]	**nSolidNo**	Solid number ID.
[in]	**nCorner**	Corner of the solid.
[in]	**nLC**	Load Case reference ID.
[out]	**pdStresses**	Normal stresses: [**SXX**, **SYY**, **SZZ**]. For additional information, please refer to Section: "Output of Element Stresses" of the Technical Reference manual.

Returns

Boolean (TRUE/FALSE) whether succeeded or not.

VBA Syntax

```
'Get All Solid Normal Stresses At Solid ID #1 and Node #1
Sub AllSolidNormalStresses()
  Dim Lcase As Long
  Dim RetVal As Variant
  Dim sldStress(0 To 2) As Double
  Dim sldID As Long
  Dim sldCor As Long
  Dim count As Integer

'Launch OpenSTAAD Object
On Error GoTo ErrHandler
  Set objOpenSTAAD = GetObject(, "StaadPro.OpenSTAAD")

'Is Analysis Completed
  Cells(1, 2).Value = objOpenSTAAD.Output.AreResultsAvailable()

'Get All Solid Normal Stresses
  Lcase = Cells(108, 2).Value        'LodeCase = 3
  sldID = Cells(109, 2).Value        'Solid ID = 1
  sldCor = Cells(111, 1).Value       'Solid Corner = 1
  RetVal = objOpenSTAAD.Output.GetAllSolidNormalStresses(sldID, sldCor, Lcase, sldStress)
  'Get All Solid Normal Stresses At Solid ID #1 and Node #1
  For count = 1 To 3
  Cells(111, count + 1).Value = sldStress(count - 1)
  Next

Set objOpenSTAAD = Nothing
Exit Sub

ErrHandler:
  MsgBox ("Run StaadPro First" & vbCrLf)
Resume Next
```

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◆ GetAllSolidPrincipalStresses()

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VARIANT OSOutputUI::GetAllSolidPrincipalStresses (const VARIANT FAR & nSolidNo,
const VARIANT FAR & nCorner,
const VARIANT FAR & nLC,
VARIANT FAR & pdStresses)

Returns all solid principal stresses.

Parameters

[in]	**nSolidNo**	Solid number ID.
[in]	**nCorner**	Corner of the solid.
[in]	**nLC**	Load Case reference ID.
[out]	**pdStresses**	Principal stresses: [**S_1**, **S_1**, **S_2**]. For additional information, please refer to Section: "Output of Element Stresses" of the Technical Reference manual.

Returns

Boolean (TRUE/FALSE) whether succeeded or not.

VBA Syntax

```
'Get All Solid Principal Stresses At Solid ID #1 and Node #1
Sub AllSolidPrincipalStresses()
  Dim Lcase As Long
  Dim RetVal As Variant
  Dim sldStress(0 To 2) As Double
  Dim sldID As Long
  Dim sldCor As Long
  Dim count As Integer

'Launch OpenSTAAD Object
On Error GoTo ErrHandler
  Set objOpenSTAAD = GetObject(, "StaadPro.OpenSTAAD")

'Is Analysis Completed
  Cells(1, 2).Value = objOpenSTAAD.Output.AreResultsAvailable()

'Get All Solid Principal Stresses
  Lcase = Cells(118, 2).Value        'LodeCase = 3
  sldID = Cells(119, 2).Value        'Solid ID = 1
  sldCor = Cells(121, 1).Value       'Solid Corner = 1
  RetVal = objOpenSTAAD.Output.GetAllSolidPrincipalStresses(sldID, sldCor, Lcase,
       sldStress)
  'Get All Solid Principal Stresses At Solid ID #1 and Node #1 & LodeCase = 3
  For count = 1 To 3
  Cells(121, count + 1).Value = sldStress(count - 1)
  Next

Set objOpenSTAAD = Nothing
Exit Sub

ErrHandler:
  MsgBox ("Run StaadPro First" & vbCrLf)
```

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```
End Sub
```

◆ GetAllSolidShearStresses()

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```
VARIANT OSOutputUI::GetAllSolidShearStresses ( const VARIANT FAR & nSolidNo,
                                               const VARIANT FAR & nCorner,
                                               const VARIANT FAR & nLC,
                                               VARIANT FAR &       pdStresses )
```

Returns all solid shear stresses.

Parameters

[in]	**nSolidNo**	Solid number ID.
[in]	**nCorner**	Corner of the solid.
[in]	**nLC**	Load Case reference ID.
[out]	**pdStresses**	Shear stresses: [**SXY**, **SYZ**, **SZX**]. For additional information, please refer to Section: "Output of Element Stresses" of the Technical Reference manual.

Returns

Boolean (TRUE/FALSE) whether succeeded or not.

VBA Syntax

```
'Get All Solid Shear Stresses At Solid ID #1 and Node #1
Sub AllSolidShearStresses()
  Dim Lcase As Long
  Dim RetVal As Variant
  Dim sldStress(0 To 2) As Double
  Dim sldID As Long
  Dim sldCor As Long
  Dim count As Integer

'Launch OpenSTAAD Object
On Error GoTo ErrHandler
  Set objOpenSTAAD = GetObject(, "StaadPro.OpenSTAAD")

'Is Analysis Completed
  Cells(1, 2).Value = objOpenSTAAD.Output.AreResultsAvailable()

'Get All Solid Shear Stresses
  Lcase = Cells(113, 2).Value        'LodeCase = 3
  sldID = Cells(114, 2).Value        'Solid ID = 1
  sldCor = Cells(116, 1).Value       'Solid Corner = 1
  RetVal = objOpenSTAAD.Output.GetAllSolidShearStresses(sldID, sldCor, Lcase, sldStress)
  'Get All Solid Shear Stresses At Solid ID #1 and Node #1
  For count = 1 To 3
  Cells(116, count + 1).Value = sldStress(count - 1)
  Next

Set objOpenSTAAD = Nothing
Exit Sub

ErrHandler:
  MsgBox ("Run StaadPro First" & vbCrLf)
Resume Next
```

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◆ GetAllSolidVonMisesStresses()

```
VARIANT OSOutputUI::GetAllSolidVonMisesStresses ( const VARIANT FAR & nSolidNo,
                                                  const VARIANT FAR & nCorner,
                                                  const VARIANT FAR & nLC,
                                                  VARIANT FAR &       pdStress )
```

Returns all solid Von Mises stresses.

Parameters

[in]	**nSolidNo**	Solid number ID.
[in]	**nCorner**	Corner of the solid.
[in]	**nLC**	Load Case reference ID.
[out]	**pdStress**	Von Mises stresses:

Returns

Boolean (TRUE/FALSE) whether succeeded or not.

VBA Syntax

```
'Get All Solid VonMises Stresses At Solid ID #1 and Node #1
Sub AllSolidVonMisesStresses()
  Dim Lcase As Long
  Dim RetVal As Variant
  Dim VONMIS As Double
  Dim sldID As Long
  Dim sldCor As Long

'Launch OpenSTAAD Object
On Error GoTo ErrHandler
  Set objOpenSTAAD = GetObject(, "StaadPro.OpenSTAAD")

'Is Analysis Completed
  Cells(1, 2).Value = objOpenSTAAD.Output.AreResultsAvailable()

'Get All Solid VonMises Stresses
  Lcase = Cells(123, 2).Value        'LodeCase = 3
  sldID = Cells(124, 2).Value        'Solid ID = 1
  sldCor = Cells(126, 1).Value       'Solid Corner = 1
  RetVal = objOpenSTAAD.Output.GetAllSolidVonMisesStresses(sldID, sldCor, Lcase, VONMIS)
  'Get All Solid VonMises Stresses At Solid ID #1 and Node #1 & LodeCase = 3
  Cells(126, 2).Value = VONMIS

Set objOpenSTAAD = Nothing
Exit Sub

ErrHandler:
  MsgBox ("Run StaadPro First" & vbCrLf)
Resume Next
End Sub
```

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