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|  | |  | | --- | | **Simulación de ICO20013**  **Fecha: jueves, 17 de agosto de 2023 Diseñador: Cristhopher Barreto**  **Nombre de estudio: Análisis estático 1**  **Tipo de análisis: Análisis estático** | | Tabla de contenidos  [Descripción 1](#_Toc143200107)  [Suposiciones 2](#_Toc143200108)  [Información de modelo 2](#_Toc143200109)  [Propiedades de estudio 3](#_Toc143200110)  [Unidades 3](#_Toc143200111)  [Propiedades de material 4](#_Toc143200112)  [Cargas y sujeciones 5](#_Toc143200113)  [Definiciones de conector 6](#_Toc143200114)  [Información de contacto 6](#_Toc143200115)  [Información de malla 7](#_Toc143200116)  [Detalles del sensor 9](#_Toc143200117)  [Fuerzas resultantes 9](#_Toc143200118)  [Vigas 9](#_Toc143200119)  [Resultados del estudio 10](#_Toc143200120)  [Conclusión 13](#_Toc143200121) | |
| Descripción No hay datos |

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| Suposiciones |

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| Información de modelo  |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  | | --- | |  |   ****Nombre del modelo:** ICO20013**  ****Configuración actual:** Predeterminado** | | | | | ****Sólidos**** | | | | | ****Nombre de documento y referencia**** | ****Tratado como**** | ****Propiedades volumétricas**** | ****Ruta al documento/Fecha de modificación**** | | **Redondeo4** | **Sólido** | ****Masa:1,34228 kg****  ****Volumen:0,000497139 m^3****  ****Densidad:2.700 kg/m^3****  ****Peso:13,1543 N**** | ****E:\ESTUDIO\Proyectos CAD\ICO20013.SLDPRT****  **Aug 17 21:00:49 2023** | |

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| Propiedades de estudio  |  |  | | --- | --- | | Nombre de estudio | Análisis estático 1 | | Tipo de análisis | Análisis estático | | Tipo de malla | Malla sólida | | Efecto térmico: | Activar | | Opción térmica | Incluir cargas térmicas | | Temperatura a tensión cero | 298 Kelvin | | Incluir los efectos de la presión de fluidos desde SOLIDWORKS Flow Simulation | Desactivar | | Tipo de solver | FFEPlus | | Efecto de rigidización por tensión (Inplane): | Desactivar | | Muelle blando: | Desactivar | | Desahogo inercial: | Desactivar | | Opciones de unión rígida incompatibles | Automático | | Gran desplazamiento | Desactivar | | Calcular fuerzas de cuerpo libre | Activar | | Fricción | Desactivar | | Utilizar método adaptativo: | Desactivar | | Carpeta de resultados | Documento de SOLIDWORKS (E:\ESTUDIO\Proyectos CAD) | |

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| Unidades  |  |  | | --- | --- | | Sistema de unidades: | Métrico (MKS) | | Longitud/Desplazamiento | mm | | Temperatura | Kelvin | | Velocidad angular | Rad/seg | | Presión/Tensión | N/m^2 | |

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| Propiedades de material  |  |  |  | | --- | --- | --- | | ****Referencia de modelo**** | ****Propiedades**** | ****Componentes**** | |  | |  |  | | --- | --- | | ****Nombre:**** | **Aleación 1060** | | ****Tipo de modelo:**** | **Isotrópico elástico lineal** | | ****Criterio de error predeterminado:**** | **Desconocido** | | ****Límite elástico:**** | **2,75742e+07 N/m^2** | | ****Límite de tracción:**** | **6,89356e+07 N/m^2** | | ****Módulo elástico:**** | **6,9e+10 N/m^2** | | ****Coeficiente de Poisson:**** | **0,33** | | ****Densidad:**** | **2.700 kg/m^3** | | ****Módulo cortante:**** | **2,7e+10 N/m^2** | | ****Coeficiente de dilatación térmica:**** | **2,4e-05 /Kelvin** | | **Sólido 1(Redondeo4)(ICO20013)** | | **Datos de curva:N/A** | | | |

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| **Cargas y sujeciones**  | ****Nombre de sujeción**** | ****Imagen de sujeción**** | ****Detalles de sujeción**** | | --- | --- | --- | | **Fijo-1** |  | |  |  | | --- | --- | | Entidades: | **2 cara(s)** | | Tipo: | **Geometría fija** | | | ****Fuerzas resultantes****   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Componentes** | **X** | **Y** | **Z** | **Resultante** | | **Fuerza de reacción(N)** | **-0,446171** | **-0,337982** | **9.813,05** | **9.813,05** | | **Momento de reacción(N.m)** | **0** | **0** | **0** | **0** | | | |  | ****Nombre de carga**** | ****Cargar imagen**** | ****Detalles de carga**** | | --- | --- | --- | | **Fuerza-1** |  | |  |  | | --- | --- | | Entidades: | **1 cara(s)** | | Tipo: | **Aplicar fuerza normal** | | Valor: | **9.800 N** | | | **Gravedad-1** |  | |  |  | | --- | --- | | Referencia: | **Alzado** | | Valores: | **0 0 -9,81** | | Unidades: | **m/s^2** | |  |  | | --- | |  | | **Imagen-2** | |

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| Definiciones de conector No hay datos |

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| Información de contacto No hay datos |

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| Información de malla  |  |  | | --- | --- | | Tipo de malla | Malla sólida | | Mallador utilizado: | Malla basada en curvatura | | Puntos jacobianos | 4 Puntos | | Tamaño máximo de elemento | 7,92385 mm | | Tamaño mínimo del elemento | 3,16954 mm | | Trazado de calidad de malla | Elementos cuadráticos de alto orden |  Información de malla - Detalles  |  |  | | --- | --- | | Número total de nodos | 39023 | | Número total de elementos | 25548 | | Cociente máximo de aspecto | 10,668 | | % de elementos cuyo cociente de aspecto es < 3 | 97,7 | | % de elementos cuyo cociente de aspecto es > 10 | 0,00391 | | % de elementos distorsionados (Jacobiana) | 0 | | Tiempo para completar la malla (hh;mm;ss): | 00:00:01 | | Nombre de computadora: |  | |  | |  |  | | --- | |  | | **Imagen-3** | |

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| Detalles del sensor No hay datos |

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| Fuerzas resultantesFuerzas de reacción  | Conjunto de selecciones | Unidades | Sum X | Sum Y | Sum Z | Resultante | | --- | --- | --- | --- | --- | --- | | Todo el modelo | N | -0,446171 | -0,337982 | 9.813,05 | 9.813,05 |  Momentos de reacción  | Conjunto de selecciones | Unidades | Sum X | Sum Y | Sum Z | Resultante | | --- | --- | --- | --- | --- | --- | | Todo el modelo | N.m | 0 | 0 | 0 | 0 | |
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| Vigas No hay datos |

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| Resultados del estudio  | Nombre | Tipo | Mín. | Máx. | | --- | --- | --- | --- | | Tensiones1 | VON: Tensión de von Mises | 2,661e+05 N/m^2  Nodo: 1975 | 3,762e+08 N/m^2  Nodo: 7096 | | **ICO20013-Análisis estático 1-Tensiones-Tensiones1** | | | |  | Nombre | Tipo | Mín. | Máx. | | --- | --- | --- | --- | | Desplazamientos1 | URES: Desplazamientos resultantes | 0,000e+00 mm  Nodo: 499 | 3,131e+00 mm  Nodo: 6150 | | **ICO20013-Análisis estático 1-Desplazamientos-Desplazamientos1** | | | |  | Nombre | Tipo | Mín. | Máx. | | --- | --- | --- | --- | | Deformaciones unitarias1 | ESTRN: Deformación unitaria equivalente | 4,576e-06  Elemento: 20895 | 3,944e-03  Elemento: 7013 | | **ICO20013-Análisis estático 1-Deformaciones unitarias-Deformaciones unitarias1** | | | |  |  | | --- | |  | | **Imagen-1** | |

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| Conclusión |