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|  | |  | | --- | | **Simulación de Pieza1**  **Fecha: viernes, 03 de mayo de 2019 Diseñador: Solidworks**  **Nombre de estudio: Estudio 1**  **Tipo de análisis: Análisis estático** | | Table of Contents  [Descripción 1](#_Toc7781458)  [Suposiciones 2](#_Toc7781459)  [Información de modelo 2](#_Toc7781460)  [Propiedades del estudio 3](#_Toc7781461)  [Unidades 3](#_Toc7781462)  [Propiedades de material 4](#_Toc7781463)  [Cargas y sujeciones 5](#_Toc7781464)  [Definiciones de conector 6](#_Toc7781465)  [Información de contacto 6](#_Toc7781466)  [Información de malla 7](#_Toc7781467)  [Detalles del sensor 8](#_Toc7781468)  [Fuerzas resultantes 8](#_Toc7781469)  [Vigas 8](#_Toc7781470)  [Resultados del estudio 9](#_Toc7781471)  [Conclusión 11](#_Toc7781472) | |
| Descripción No hay datos |

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| Suposiciones |

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| Información de modelo  |  |  |  |  |  | | --- | --- | --- | --- | --- | | |  | | --- | |  |   ****Nombre del modelo:** Pieza1**  ****Configuración actual:** Predeterminado** | | | | | ****Sólidos**** | | | | | ****Nombre de documento y referencia**** | ****Tratado como**** | ****Propiedades volumétricas**** | ****Ruta al documento/Fecha de modificación**** | | **Saliente-Extruir1** | **Sólido** | ****Masa:14.5487 kg****  ****Volumen:0.00185333 m^3****  ****Densidad:7850 kg/m^3****  ****Peso:142.577 N**** |  | |

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| Propiedades del estudio  |  |  | | --- | --- | | Nombre de estudio | Estudio 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 | Automática | | Gran desplazamiento | Desactivar | | Calcular fuerzas de cuerpo libre | Activar | | Fricción | Desactivar | | Utilizar método adaptativo: | Desactivar | | Carpeta de resultados | Documento de SolidWorks (c:\users\maq-e10\appdata\local\temp) | |

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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:**** | **ASTM A36 Acero** | | ****Tipo de modelo:**** | **Isotrópico elástico lineal** | | ****Criterio de error predeterminado:**** | **Desconocido** | | ****Límite elástico:**** | **2.5e+008 N/m^2** | | ****Límite de tracción:**** | **4e+008 N/m^2** | | ****Módulo elástico:**** | **2e+011 N/m^2** | | ****Coeficiente de Poisson:**** | **0.26** | | ****Densidad:**** | **7850 kg/m^3** | | ****Módulo cortante:**** | **7.93e+010 N/m^2** | | **Sólido 1(Saliente-Extruir1)(Pieza1)** | | **Datos de curva:N/A** | | | |

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| **Cargas y sujeciones**  | ****Nombre de sujeción**** | ****Imagen de sujeción**** | ****Detalles de sujeción**** | | --- | --- | --- | | **Fijo-1** |  | |  |  | | --- | --- | | Entidades: | **1 cara(s)** | | Tipo: | **Geometría fija** | | | ****Fuerzas resultantes****   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Componentes** | **X** | **Y** | **Z** | **Resultante** | | **Fuerza de reacción(N)** | **-4.84624** | **1.2902** | **-2.43537** | **5.57509** | | **Momento de reacción(N·m)** | **0** | **0** | **0** | **0** | | | | | **Sobre caras cilíndricas-1** |  | |  |  | | --- | --- | | Entidades: | **1 cara(s)** | | Tipo: | **Sobre caras cilíndricas** | | Traslación: | **0, ---, ---** | | Unidades: | **mm** | | | ****Fuerzas resultantes****   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Componentes** | **X** | **Y** | **Z** | **Resultante** | | **Fuerza de reacción(N)** | **-38.415** | **-0.642206** | **-387.02** | **388.922** | | **Momento de reacción(N·m)** | **0** | **0** | **0** | **0** | | | | | **Sobre caras cilíndricas-2** |  | |  |  | | --- | --- | | Entidades: | **1 cara(s)** | | Tipo: | **Sobre caras cilíndricas** | | Traslación: | **---, ---, 0** | | Unidades: | **mm** | | | ****Fuerzas resultantes****   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Componentes** | **X** | **Y** | **Z** | **Resultante** | | **Fuerza de reacción(N)** | **-38.415** | **-0.642206** | **-387.02** | **388.922** | | **Momento de reacción(N·m)** | **0** | **0** | **0** | **0** | | | |  | ****Nombre de carga**** | ****Cargar imagen**** | ****Detalles de carga**** | | --- | --- | --- | | **Torsión-1** |  | |  |  | | --- | --- | | Entidades: | **1 cara(s)** | | Referencia: | **Cara< 1 >** | | Tipo: | **Aplicar momento torsor** | | Valor: | **117810 lbf·in** | | |

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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 | 0 in | | Tamaño mínimo del elemento | 0 in | | Calidad de malla | Elementos cuadráticos de alto orden |  Información de malla - Detalles  |  |  | | --- | --- | | Número total de nodos | 73749 | | Número total de elementos | 49051 | | Cociente máximo de aspecto | 3.8876 | | % de elementos cuyo cociente de aspecto es < 3 | 99.9 | | % de elementos cuyo cociente de aspecto es > 10 | 0 | | % de elementos distorsionados (Jacobiana) | 0 | | Tiempo para completar la malla (hh;mm;ss): | 00:00:05 | | Nombre de computadora: | MAQ-E1-PC | |  | | |

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| Detalles del sensor No hay datos |

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| Fuerzas resultantesFuerzas de reacción  | Conjunto de selecciones | Unidades | Suma X | Suma Y | Suma Z | Resultante | | --- | --- | --- | --- | --- | --- | | Todo el modelo | N | -18.6558 | 0.535798 | 17.6779 | 25.7067 |  Momentos de reacción  | Conjunto de selecciones | Unidades | Suma X | Suma Y | Suma 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 | TXY: Tensión cortante en dir. Y en plano YZ | -10016.3 psi  Nodo: 1950 | 10016.7 psi  Nodo: 979 | | **Pieza1-Estudio 1-Tensiones-Tensiones1** | | | |  | Nombre | Tipo | Mín. | Máx. | | --- | --- | --- | --- | | Desplazamientos1 | URES: Desplazamiento resultante | 0 mm  Nodo: 1 | 0.263828 mm  Nodo: 1925 | | **Pieza1-Estudio 1-Desplazamientos-Desplazamientos1** | | | |  | Nombre | Tipo | Mín. | Máx. | | --- | --- | --- | --- | | Deformaciones unitarias1 | ESTRN: Deformación unitaria equivalente | 0.000256878  Elemento: 12292 | 0.000495172  Elemento: 47358 | | **Pieza1-Estudio 1-Deformaciones unitarias-Deformaciones unitarias1** | | | | |

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| Conclusión |