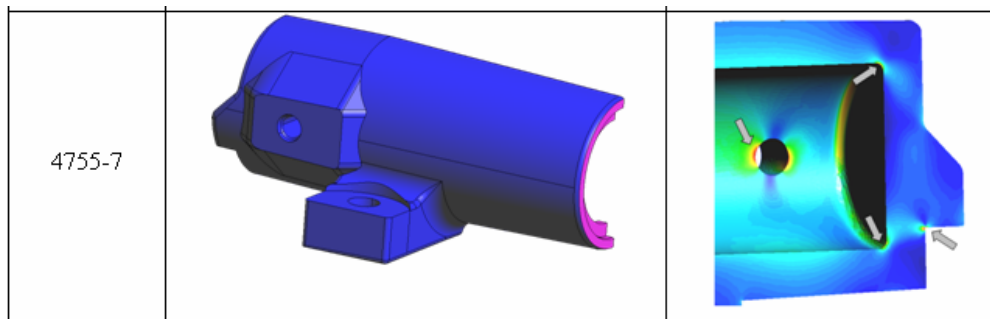
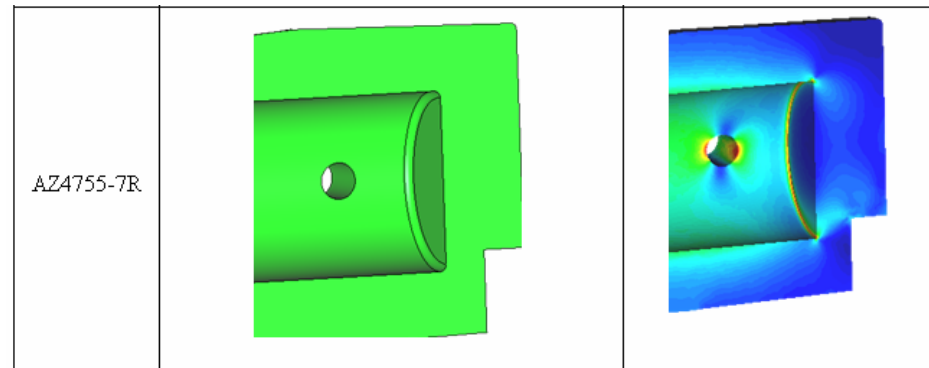
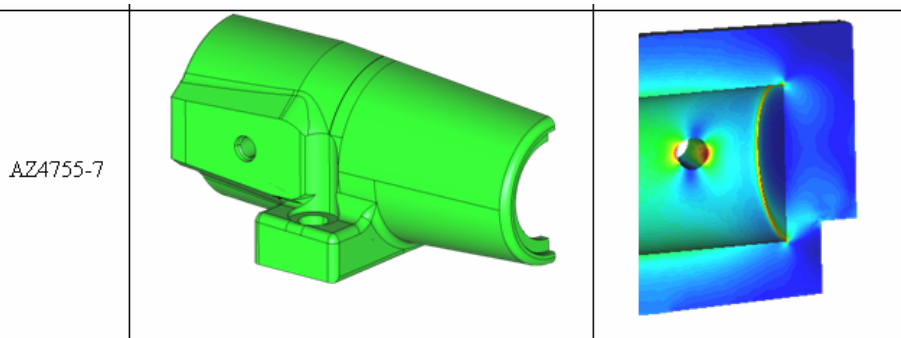
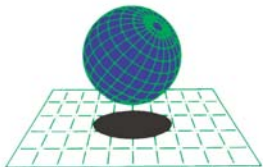


Work performed:

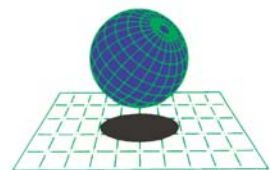
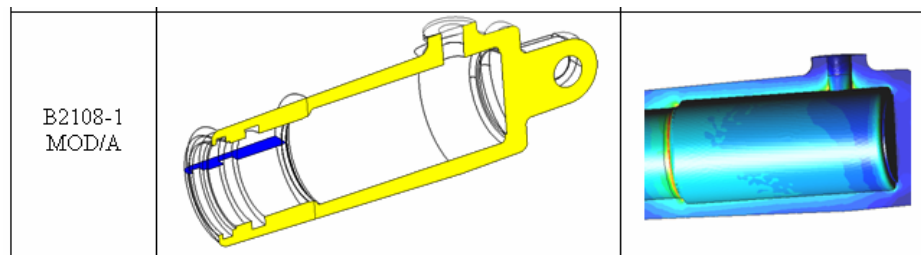
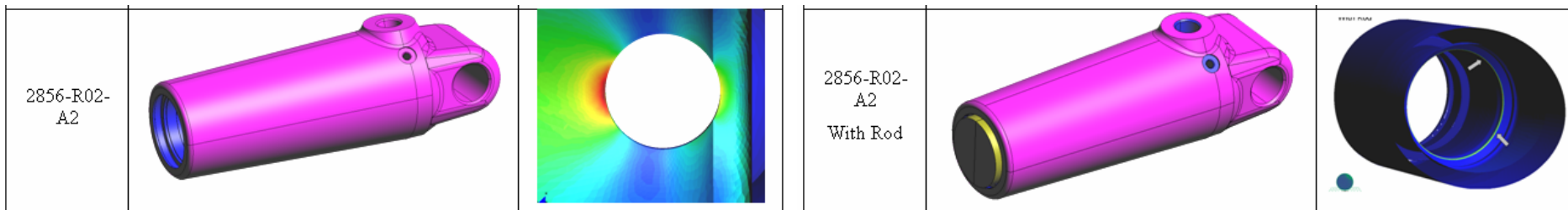
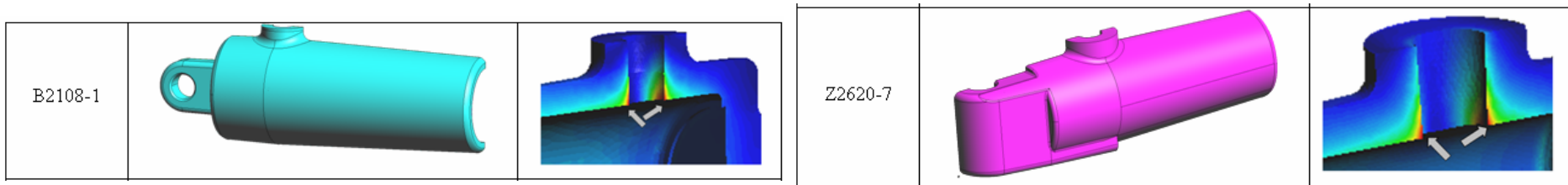
A set of eight different cylinders with different geometries and boundary conditions were analyzed.



This study was proposed by Pedro Roquet to analyze the stress influence in the operating life of the cylinders

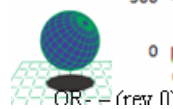
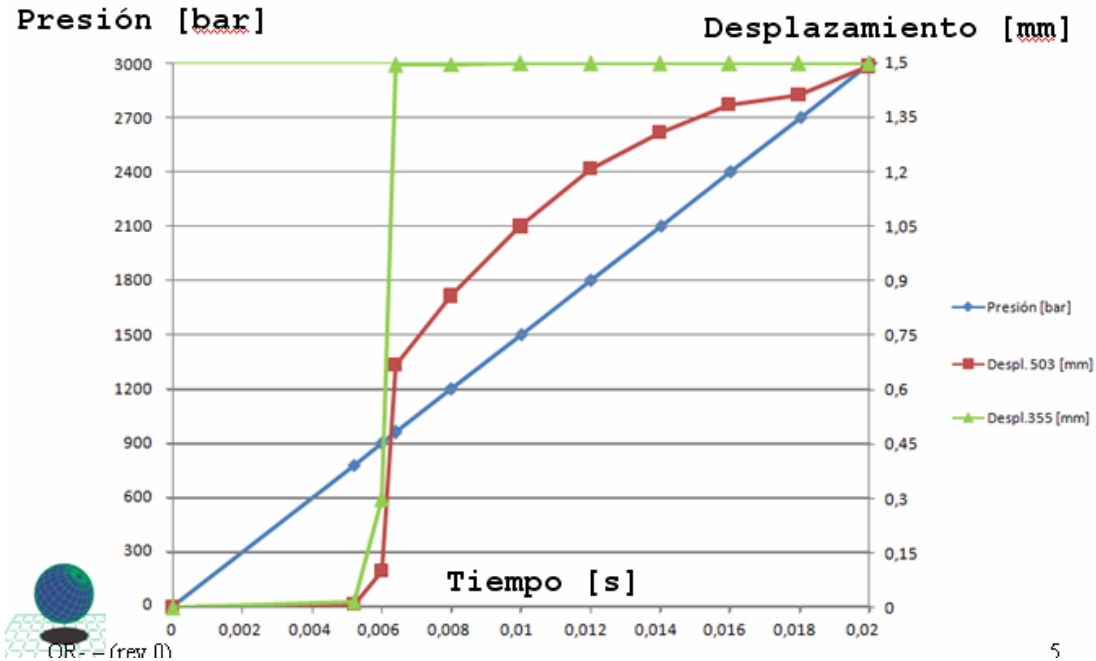
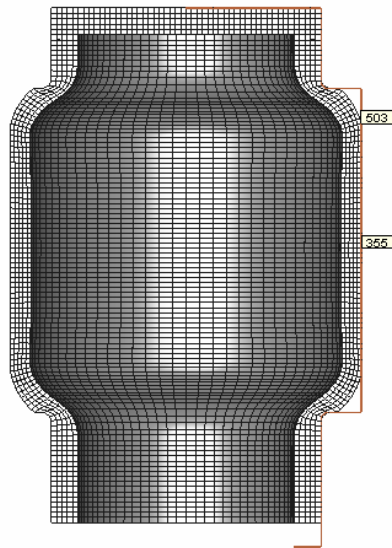


Work performed:



Work performed:

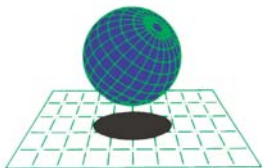
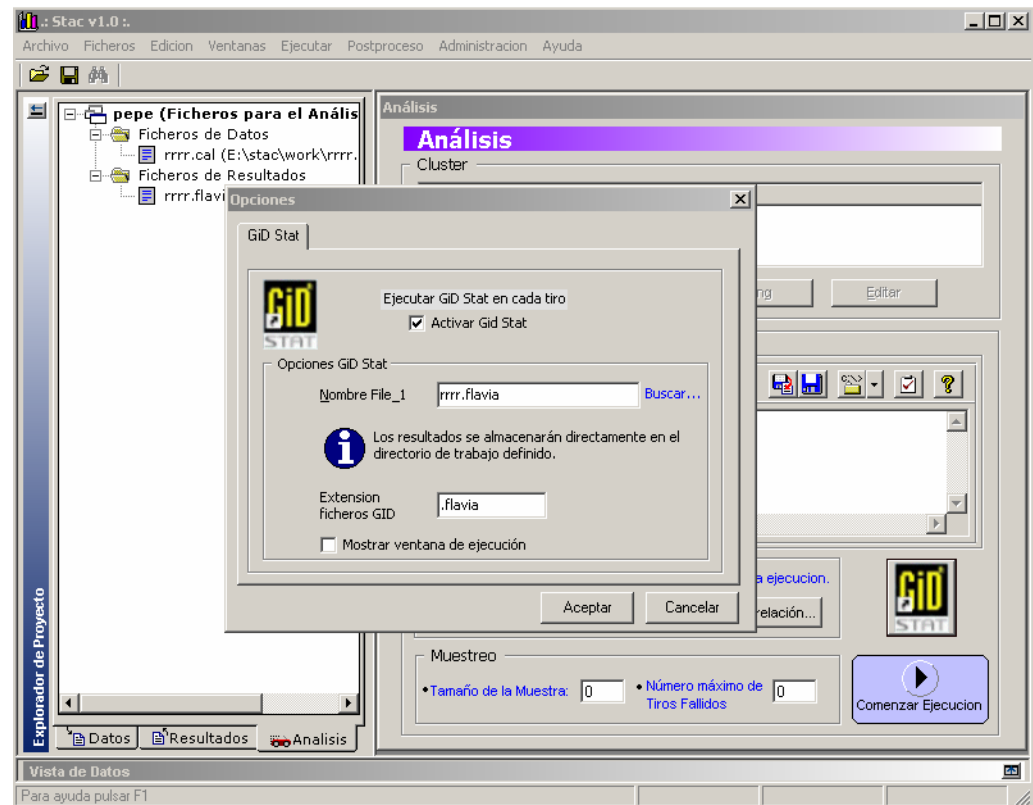
Hidroconforming analysis.



Work performed:

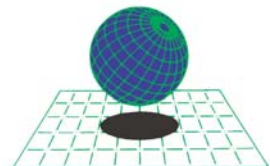
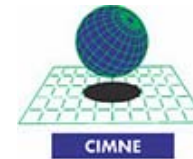
STAC

Windows and Unix
together.



Objectives:

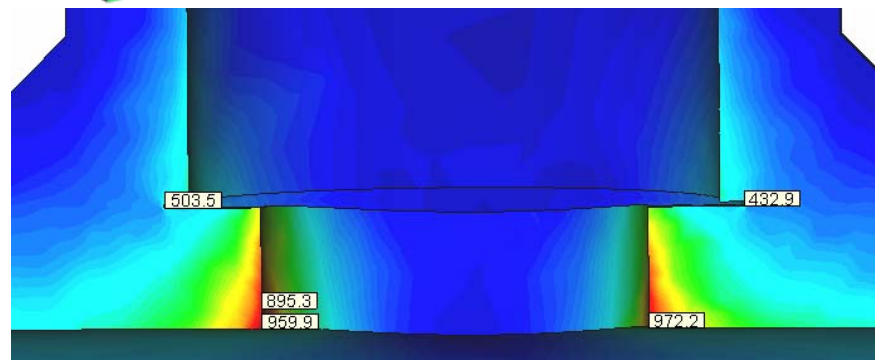
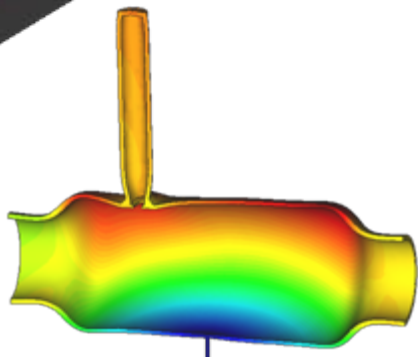
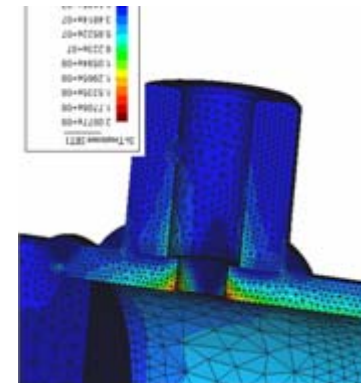
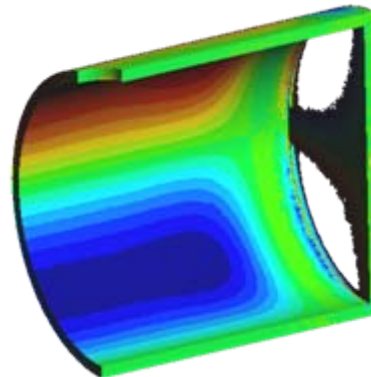
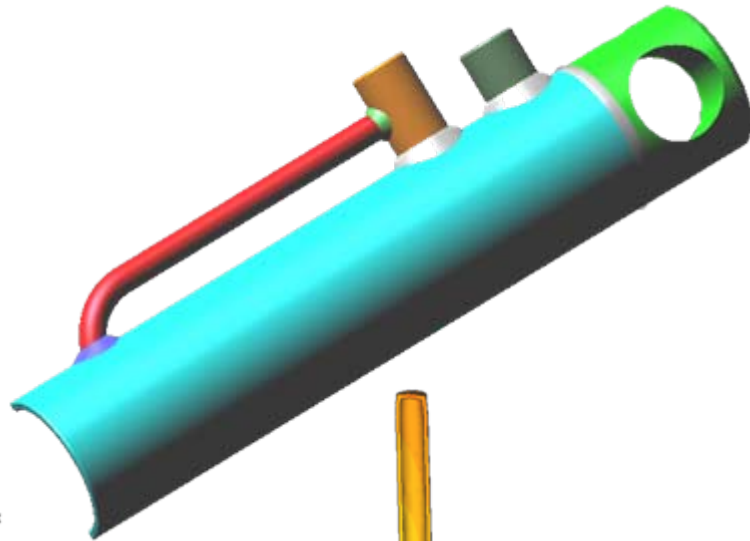
WP2 will focus in the hydraulic cylinder design and analysis procedures in relation with structural requirements of parts and elements and fluid-dynamic aspects related with cylinder performance, including seal/oil/surface interaction.



Work performed:

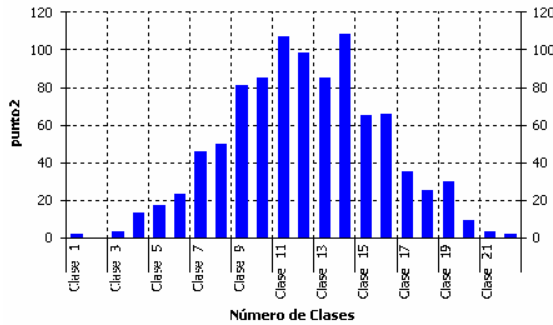
More than 180 cylinders were analyzed with different loads and boundary conditions.

A stress comparison with classical theories were done.



Work performed:

More than 400 cylinders were analyzed under STAC.



STAC v1.0 Command Window Script:

```

1 escape escape Files Read
2 (K:\CILIN_EST_ROQ\base2.gid)
3 escape escape escape data materials newmaterial Steel Steel yes M
4 escape escape escape Geometry Create Point
5 16.00 15.00 00.00
6 48.75 15.00 00.00
7 escape Create Line
8 escape
9 Create NurbsSurface
  
```

Distribución Normal Dialog Box:

$f_x(x) = \frac{1}{\sqrt{2\pi}\sigma} \exp\left[-\frac{1}{2}\left(\frac{x-\mu}{\sigma}\right)^2\right], -\infty < x < \infty$
 $\mu = \mu_x$ $\sigma = \sigma_x$

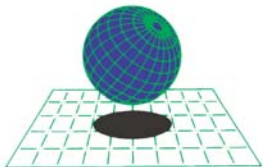
Datos Distribución:

$\mu_x = 15$
 $\sigma_x = 0,75$
 $\eta = \frac{\sigma}{\mu} = 0,05$

Nombre: punto1

Buttons: Aceptar, Cancelar, Aplicar

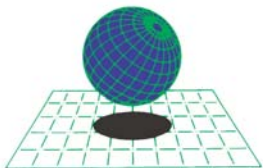
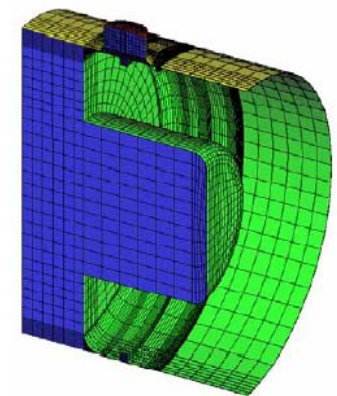
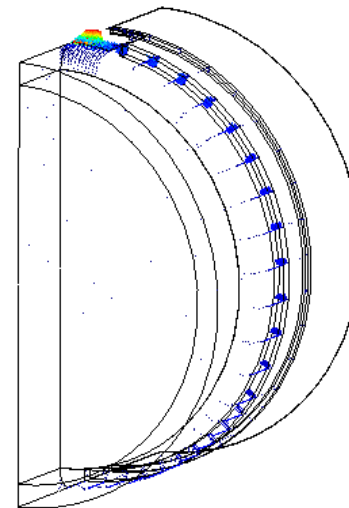
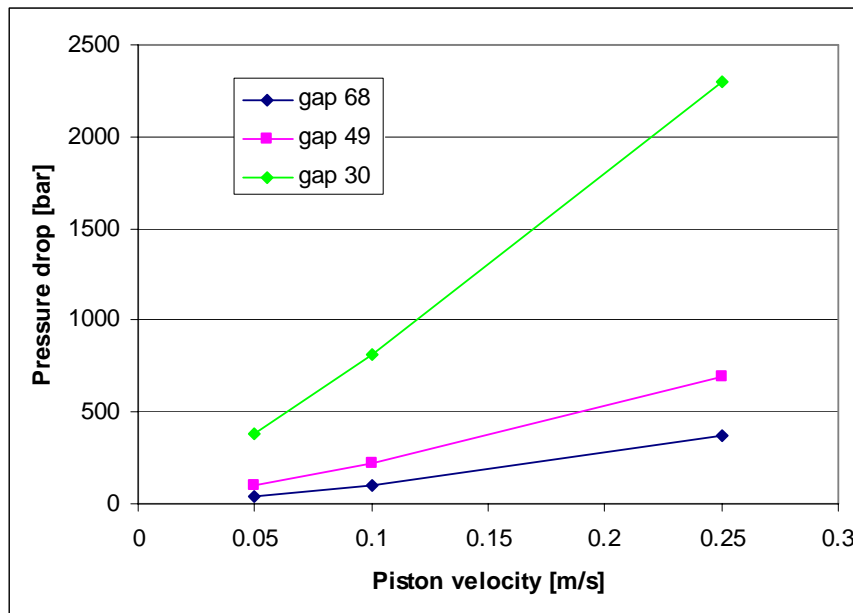
	StDev	Fila	Columna	Longitud	Documento
punto2	0,75	5	7	5	K:\CILIN_EST_ROQ\cilind_gen...
tensionvm	-	1	9	13	K:\CILIN_EST_ROQ\pp.vnm



Work performed:

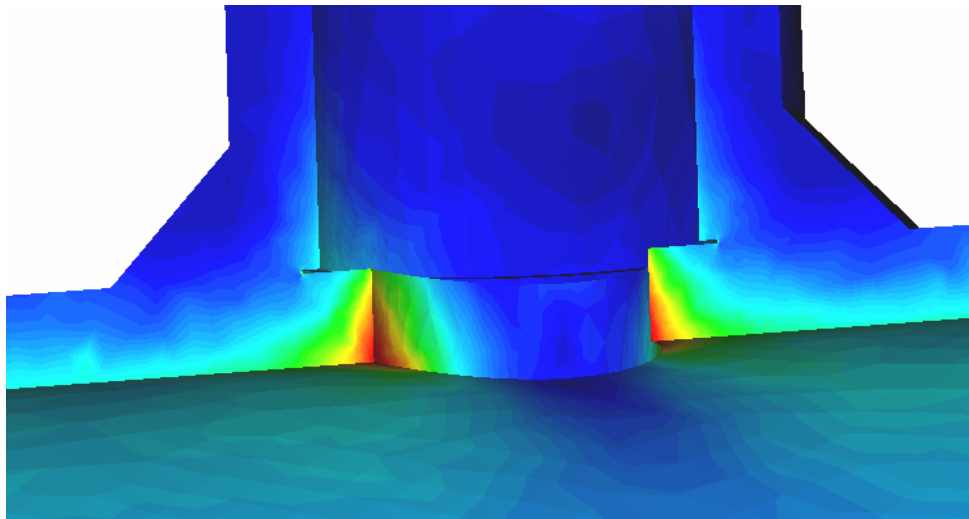
Fluid dynamic analysis.

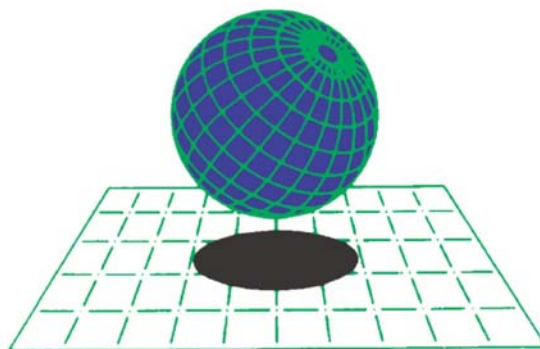
Pressure Drop chart



Exploitable results:

A simple methodology to infer the cylinders life using standard FEM





CIMNE

www.cimne.com

