Creación de superficies.

Objetivos.

En la siguiente práctica se desarrollará el siguiente modelo.

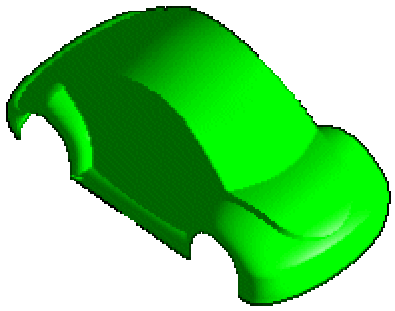

Fig. 1 Modelo Propuesto: Creación de superficies.

1. Crear un archivo.
   <File> <New...>
   [Units: Millimeters]
   Nombre del archivo: bocho
   <OK>

2. Selección de vista en isométrico
   <MB3>
   [<Replace view...> <TFR-ISO>]

3. Creación de una capa (layers).

Se crearán 5 capas con los nombres Top, Rear, Side, Front, y Surface
   <Format>
   <Layer Category…>

Category: Surface
[Create/Edit]
Layer And Pending Status: 1

[Add]
[OK]
Category: Rear
[Create/Edit]
Layer And Pending Status: 5
[Add]
[OK]

De la misma forma crear las siguientes capas:

CATEGORY	LAYER
Top	2
Side	3
Front	4

4. Hacer la capa de trabajo la layer Top.

<Format>
<Layer Settings>
[Category]
[Top]
[Make Work]
[OK]

5. Creación de 4 splines.
<Insert>
<Curve>
<Spline…>
Elegir método: **[Through Points]**
[OK]
[Point constructor]

Curva 1 :

Pt	XC	YC	ZC
1	-34	-42	6
2	-31	-42	20
3	-21	-42	30
4	-8	-42	34
5	9	-42	36
6	20	-42	36

[OK][OK][OK]

Curva 2:

POINT	XC	YC	ZC
1	20	0	37.5
2	5	0	37
3	-12	0	35
4	-24	0	31
5	-35	0	21
6	-41	0	6

[OK][OK][OK][OK]

Curva 3:

PT	XC	YC	ZC
1	-4	-42	6
2	12	-42	33
3	35	-42	54
4	67	-42	58
5	96	-42	47
6	117	-42	24
7	143	-42	6

[OK][OK][OK][OK]

Curva 4:

PT	XC	YC	ZC
1	-41	0	6
2	-12	0	29
3	18	0	50
4	53	0	61
5	89	0	54
6	119	0	32
7	143	0	6

[OK][OK][OK]
[Cancel]

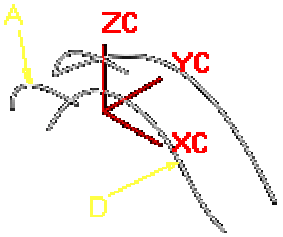

Figura 1

<Edit>
<Transform…>
[Seleccionar A and D (Figura1)]
[OK]
[Translate]
[Delta]
DXC: **0**
DYC: **84**
DZC: **0**
[OK]

[Copy]
[Cancel]

<Format> <Layer Setting…>
Category: **[SIDE] [Make Work]**
Category: **[TOP] [Invisible]**
[OK]
<Insert> <Curve> <Basic Curves…>
[Arc]
String Mode: **off**
Creation Method: Start, End, Point on Arc
Point Method: Point Constructor

CONTROL POINT	XC	YC	ZC
Start Point	143	-25	65
End Point	-24	-12	65
Point on Arc	53	-23	65

CONTROL POINT	XC	YC	ZC
Start Point	-24	-12	65
End Point	-24	12	65
Point on Arc	-26	0	65

CONTROL POINT	XC	YC	ZC
Start Point	143	25	65
End Point	-24	12	65
Point on Arc	53	23	65

[Back]

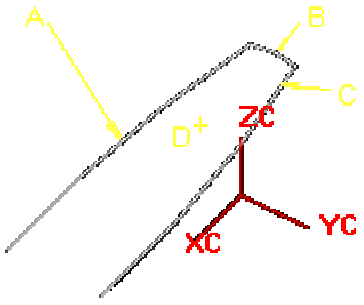

Figura 2

<Fillet>
[2 Curve Fillet]

Radius: **6**

Trim Option: Trim First Curve: **On**
Trim Second Curve: **On**
[Seleccionar B y A [Figura 2)]
[Seleccionar D [Figura 2)]
[Seleccionar C y B [Figura 2)]
[Seleccionar D [Figura 2)]
[Back]
[Arc]
String Mode: **off**
Creation Method: Start, End, Point on Arc
Point Method :**Point Constructor**

CONTROL POINT	XC	YC	ZC
Start Point	-25	-23	25
End Point	143	-20	25
Point on Arc	29	-35	25

CONTROL POINT	XC	YC	ZC
Start Point	-25	23	25
End Point	-25	-23	25
Point on Arc	-33	-10	25

CONTROL POINT	XC	YC	ZC
Start Point	-25	23	25
End Point	143	20	25
Point on Arc	29	35	25

[Back]

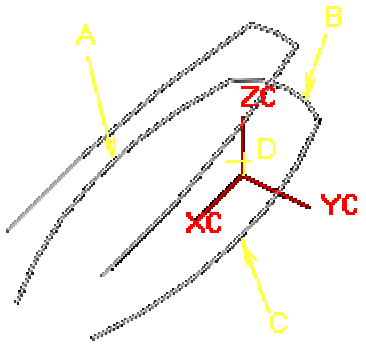

Figura 3

<Fillet>
<2 Curve Fillet>
Radius: **15**
Trim Option: Trim First Curve: **On**
Trim Second Curve: **On**

[Seleccionar B y A (Figura 3]
[Seleccionar D (Figura 3)]
[Seleccionar C y B (Figura 3)]
[Seleccionar D (Figura 3)]
[Cancel]

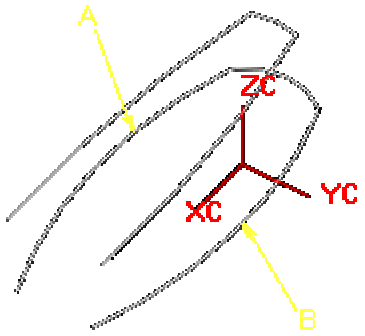

Figura 4

<Edit> <Transform…>
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[Seleccionar A y B (Figura 4)]
[OK]
[Translate]
[Delta]
DXY: **0**
DYC: **0**
DZC: **-25**
[OK]
[Copy]
[Cancel]

<Format> <Layer Setting…>
Category: **[REAR] [Make Work]**
Category: **[SIDE] [Invisible]**
[OK]

<Insert> <Curve> <Basic Curves…>
[Line]
Point Method: **Point Constructor**

PTS	XC	YC	ZC
Start	124	42	0
End	124	42	7

[OK]

PTS	XC	YC	ZC
Start	92	42	0
End	92	42	7

[OK]
[Back]
[Arc]
Point Method: Point Constructor

CONTROL POINT	XC	YC	ZC
Start Point	124	42	7
End Point	92	42	7
Point on Arc	108	42	23

[Cancel]
<Insert> <Curve> <Spline…>
[Through Points]
[OK]
[Point constructor]

PTS	XC	YC	ZC
1	108	-42	23
2	108	-39	30
3	108	-31.5	32.5
4	108	0	31.5
5	108	31.5	32.5
6	108	39	30
7	108	42	23

[OK][OK][OK][OK]

POINT	XC	YC	ZC
1	92	-42	0
2	87	-39	0
3	83	-31.5	0
4	83.5	0	0
5	83	31.5	0
6	87	39	0
7	92	42	0

[OK][OK][OK]

PTS	XC	YC	ZC
1	124	-42	0
2	129	-39	0
3	133.5	-23	0
4	134	0	0
5	133.5	23	0
6	129	39	0
7	124	42	0

[OK][OK][OK]

PTS	XC	YC	ZC
1	121	-42	16
2	133.5	-39	16
3	137.5	-23	16
4	138.5	0	16
5	137.5	23	16
6	133.5	39	16
7	121	42	16

[OK][OK][OK]

PTS	XC	YC	ZC
1	120	-42	17.5
2	129	-39	17.5
3	133.5	-23	17.5
4	134	0	17.5
5	133.5	23	17.5
6	129	39	17.5
7	120	42	17.5

[OK][OK][OK]

PTS	XC	YC	ZC
1	83.5	0	0
2	84.5	0	13
3	90	0	24
4	108	0	31.5
5	113.5	0	31
6	125	0	26
7	134	0	17.5
8	138	0	16
9	134	0	0

[OK][OK][OK]

PTS	XC	YC	ZC
1	129	39	0
2	133.5	39	16
3	129	39	17.5

[OK][OK][OK]

PTS	XC	YC	ZC
1	133.5	23	0
2	137.5	23	16
3	133.5	23	17.5

[OK]
[OK]

[OK]

PTS	XC	YC	ZC
1	134	0	0
2	138.5	0	16
3	134	0	17.5

[OK][OK][OK]

PTS	XC	YC	ZC
1	133.5	-23	0
2	137.5	-23	16
3	133.5	-23	17.5

[OK][OK][OK]

PTS	XC	YC	ZC
1	129	-39	0
2	133.5	-39	16
3	129	-39	17.5

[OK][OK][OK]

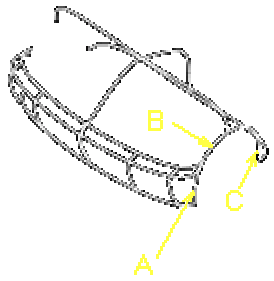

Figura 5

<Edit> <Transform…>
[Seleccionar líneas A, B, y C)
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[Translate]
[Delta]
DXY: **0**
DYC: **-84**
DZC: **0**
[OK]
[Copy]
[Cancel]

<Format> <Layer Setting>
[Front] [Make Work]
[OK]
<Insert> <Curve> <Basic Curves…>
[Line]
Point Method: **Point Constructor**

PTS	XC	YC	ZC
Start	16	-42	0
End	16	-42	7

[OK]

PTS	XC	YC	ZC
Start	-16	-42	0
End	-16	-42	7

[OK]
[Back]
[Arc]
Point Method: **Point Constructor**

CONTROL POINT	XC	YC	ZC
Start Point	-16	-42	7
End Point	16	-42	7
Point on Arc	0	-42	23

CONTROL POINT	XC	YC	ZC
Start Point	16	-34	5
End Point	16	-42	0
Point on Arc	16	-39	4

[Cancel]
<Insert> <Curve> <Spline…>
[Through Points]
[OK]
[Point constructor]

PTS	XC	YC	ZC
1	0	-42	23
2	0	-41.5	28
3	0	-37.5	31.5
4	0	-25	33.5
5	0	25	33.5
6	0	37.5	31.5
7	0	41.5	28
8	0	42	23

[OK][OK][OK][OK]

PTS	XC	YC	ZC
1	16	-42	0
2	20.5	-40	0
3	24.5	-23.5	0

4	24.5	0	0
5	24.5	23.5	0
6	20.5	40	0
7	16	42	0

[OK][OK][OK]

PTS	XC	YC	ZC
1	-16	-42	0
2	-30.5	-36	0
3	-35.5	-17	0
4	-36	0	0
5	-35.5	17	0
6	-30.5	36	0
7	-16	42	0

[OK][OK][OK]

PTS	XC	YC	ZC
1	-13	-42	16
2	-31.5	-37.5	16
3	-38	-20	16
4	-39	0	16
5	-38	20	16
6	-31.5	37.5	16
7	-13	42	16

[OK][OK][OK]

PTS	XC	YC	ZC
1	-12	-42	17.5
2	-30.5	-37	17.5
3	-35.5	-19	17.5
4	-36.5	0	17.5
5	-35.5	19	17.5
6	-30.5	37	17.5
7	-12	42	17.5

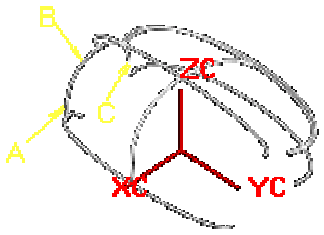
[OK][OK][OK]

PTS	XC	YC	ZC
1	24.5	0	0
2	24	0	19.5
3	-8	0	34
4	-31.5	0	21.5
5	-36.5	0	17.5

[OK]
[OK]

[Cancel]
[Back]
[Arc]
Point Method: **Point Constructor**

CONTROL POINT	XC	YC	ZC
Start Point	-16	-42	7
End Point	16	-42	7
Point on Arc	0	-42	23



<Edit> <Transform…>
[Seleccionar A, B, y C)
[OK]
[Translate]
[Delta]
DXY: **0**
DYC: **84**
DZC: **0**
[OK]
[Copy]
[Cancel]