

D. Prolonging,Triming and Testing for the Curve Face of Vane Outline

To test the error of real measure point with structuring curve face of the vane outline, using info/Distance information tool of single point with curve or curve face distance, the curve face will be colored from all screen show to large local area slowly, follow as Figure 4.

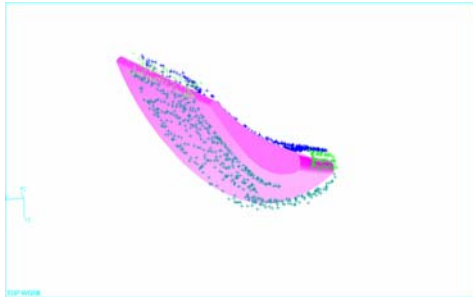


Figure4. The curve face of vane

In this time, since the data point always shows on the screen with “+”, which is not variable. After the data point is enlarged to certain degree, the big error point is blocked by curve face and disappears on the screen. If the errors of many points with curve face distance are bigger, we return to edit and to adjust the curve of the curve face modeling.

IV. 3D MODELING OF PILOT WHEEL

The vane of pilot wheel is structured, its data are transfer into “Para solid”, are exported to Solid edge software, and the surplus geometry feature is structured. This is usual geometry modeling, but the relations of measure point coordinate with surplus geometry feature must be in mind. 3D modeling follows as Figure 5.



Figure5. The pilot wheel

V. CONCLUSIONS

The combination of reverse design and positive design provides a new design idea for production outer shape and structure design. Reverse design of production is the supplement and improving for positive CAD design and its function can not be replaced. In the design state of production concept, first the mud model or the timer model is made, then using 3D measure system the quick measure is made, and the modeling data is transferred into scattered and ordered 3D point cloud, finally using 3D CAD software 3D reconstruction is made and the ideal production is designed by positive design.

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