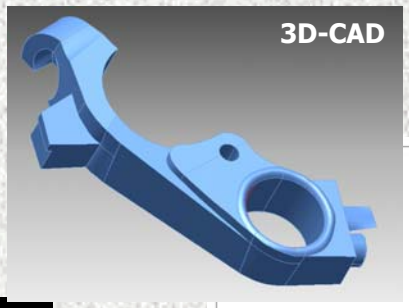
Scanning Service and Data Analysis

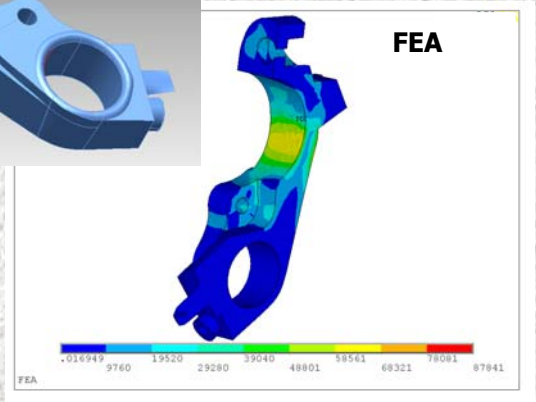
HITACHI
Inspire the Next

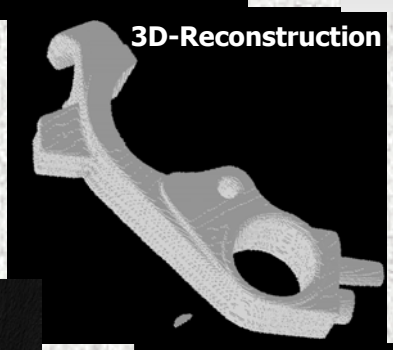
X-ray Comuputed Tomography

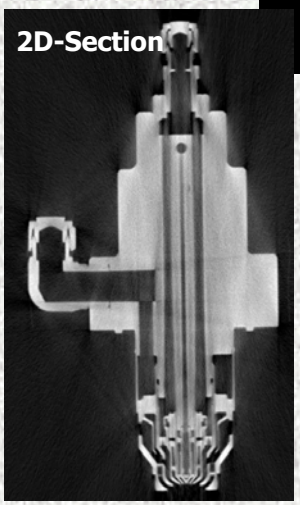
… from real to digital world

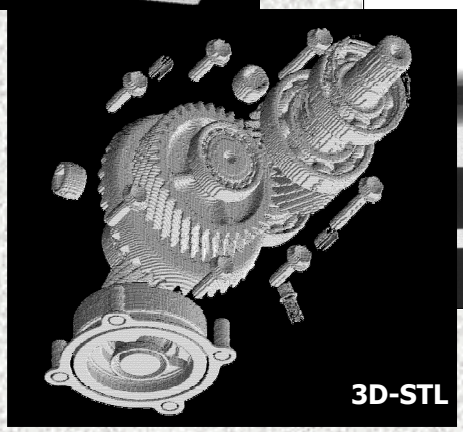
Hitachi X-ray Computed Tomography (XCT) is a state of the art technology to provide scanning and data analysis on various components. XCT can be used for Non-Destructive Testing to improve quality (void detection, dimensional analysis, etc.)

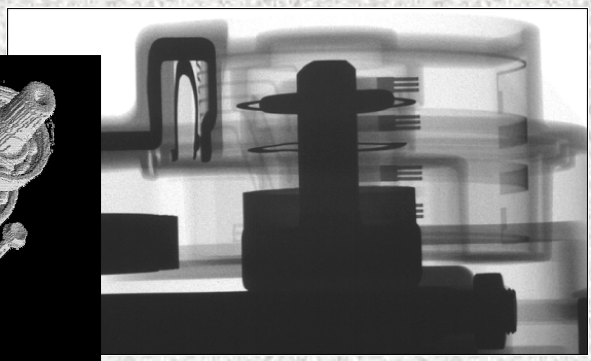












Assembly Scan

FEATURES

- **Internal Dimensional Measurement**
- **Density Analysis**
- **Integrity Analysis of Assemblies**
- **Actual & Designed Shape Comparison**
- **STL File Generation**
- **Support for Reverse Engineering and Rapid Prototyping**

APPLICATIONS

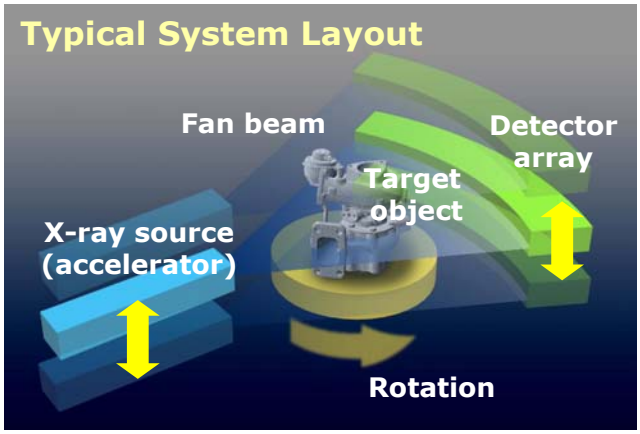
Automotive:

- **Engine Blocks, Heads**
- **Transmission**
- **Body, Chassis, Suspension, etc.**

Materials:

- **Steel, Aluminum, Magnesium, Copper, etc.**
- **Plastic, Ceramic, Composite, etc.**

XCT Hardware Technology



Data Management

Device Controller | **Data Processing**

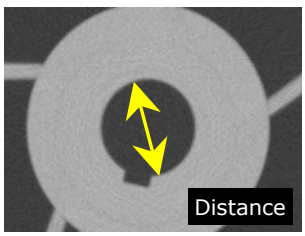
Master Terminal

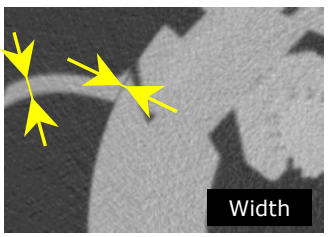
Sectional View

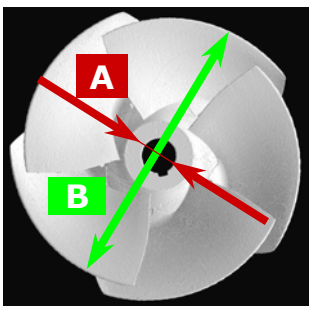
3D Model View

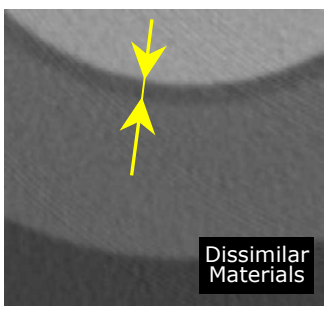
Features of Hitachi's XCT Software

- ***Dimensional Measurements***









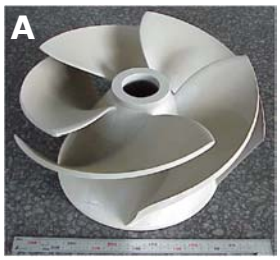
- ***Measurement Accuracy***

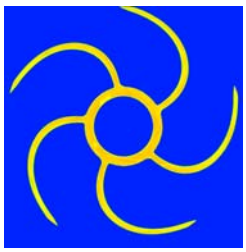
	Measurement (mm)		Error (mm)
	Using Hitachi Software	Using CMM	
A	35.51 ± 0.02	35.517	0.007
B	200.10 ± 0.01	200.110	0.010

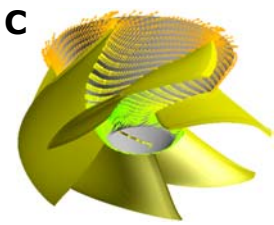
Hitachi's Complete XCT Solution

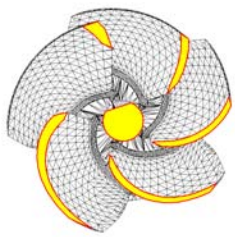
Advanced 2D bitmap analysis and 3D volumetric reconstruction enhance the use of XCT for dimensional analysis and void detection of components:

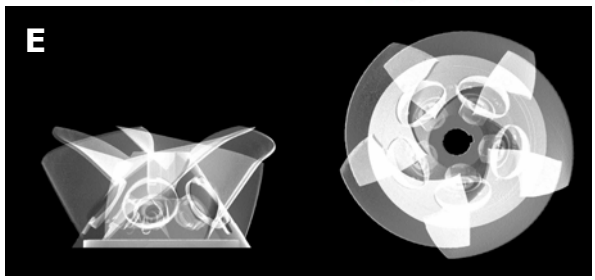
- Photo of Actual Component (A)
- Single CT Slice (B)
- Multiple Skewed Slices (C)
- Reconstructed STL model (D)
- Transparent Views of Reconstructed CT Model (E)
- Surface Models (F)
- Cut Models (G)
- Comparison of CAD and CT models (H)

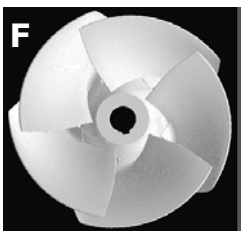


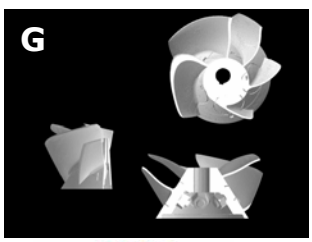


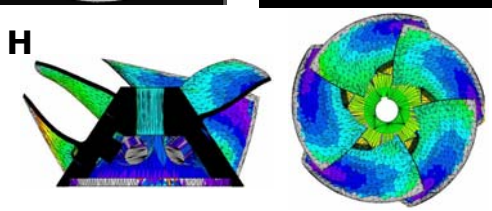












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