



Corrosion analysis examples

Handy 3D scanner
(entry model)

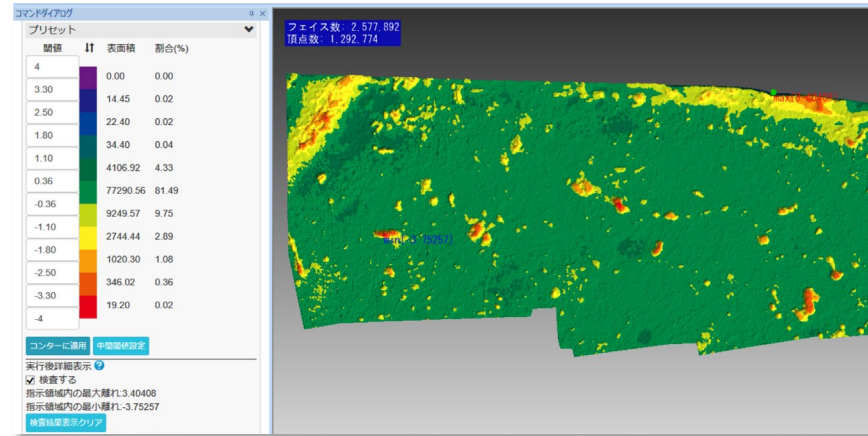


3DSL-Vega

PLY data



Analysis software
"POLYGONALmeister"



PLY data



Handy 3D scanner
(mid-end model)



3DSL-Rigil

2026.7.23

SEIKOWAVE K.K. (TOKYO, JAPAN)

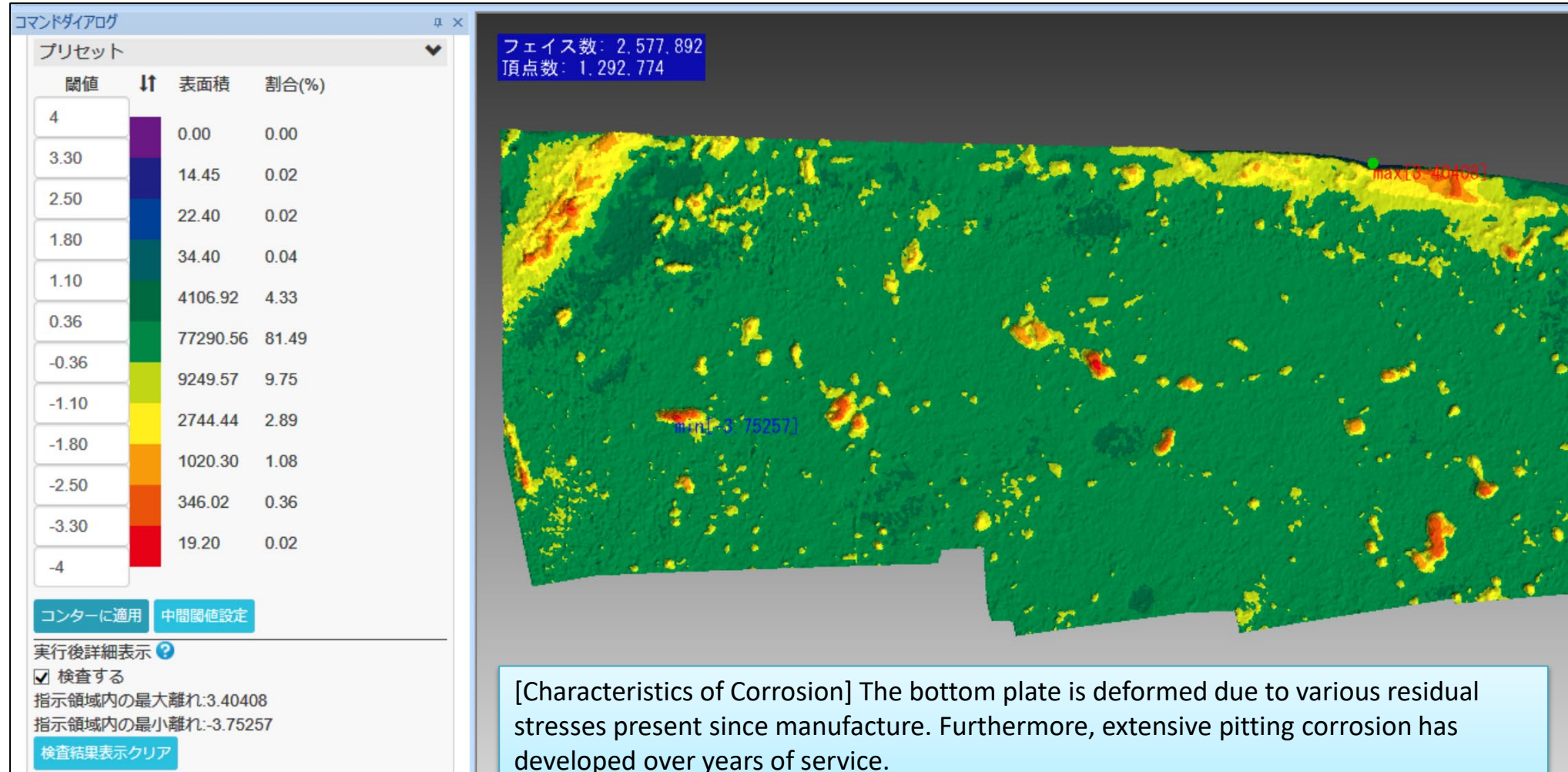
List of examples

- Cylindrical storage tank: corrosion on a bottom plate
- Piping: corrosion on straight pipe, elbow, around welding lines
- Towers: corrosion on cylindrical side wall, head-shell, around thermal insulation ring
- Steel bridge: corrosion on sway bracing, longitudinal stiffener, steel plate thickness

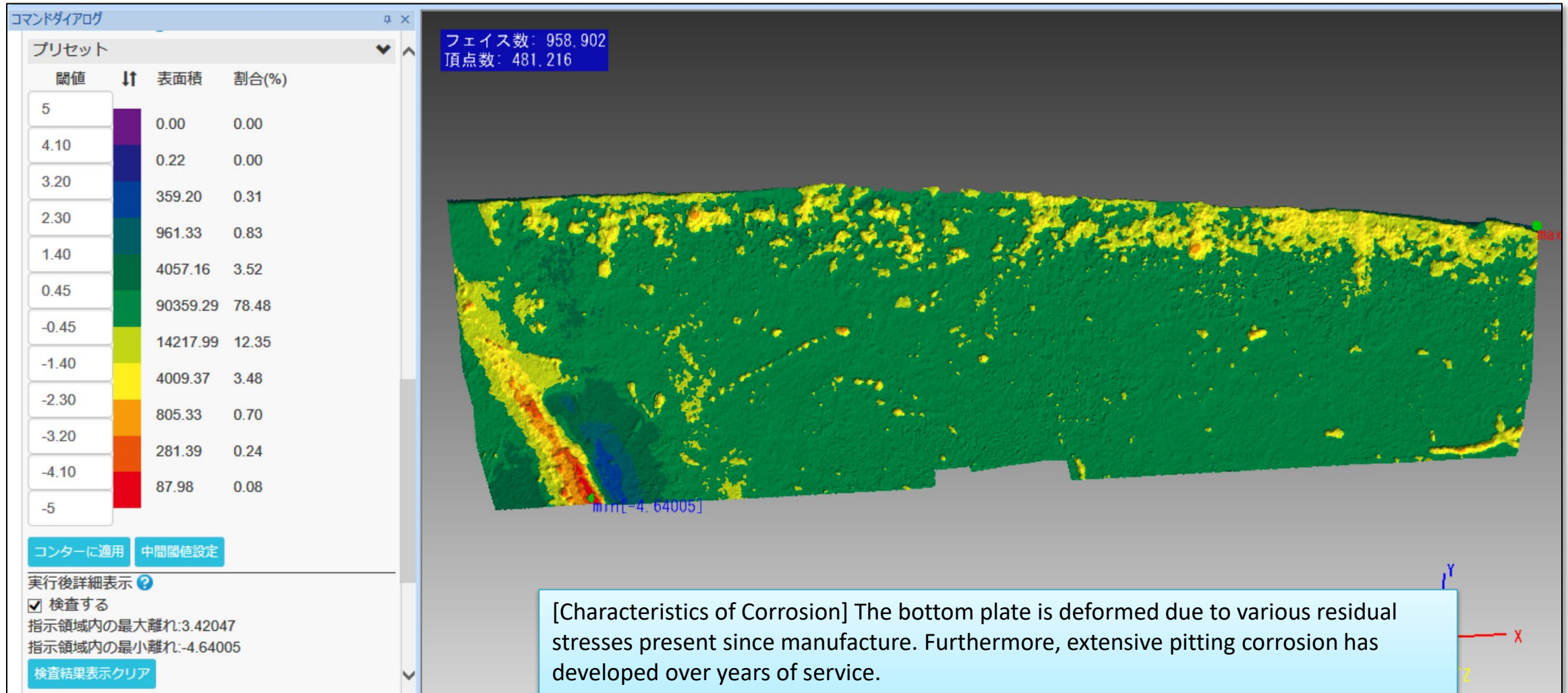
Note:

The images on the following pages show Japanese texts.
The English version is also available.

Cylindrical storage tank: bottom plate 1



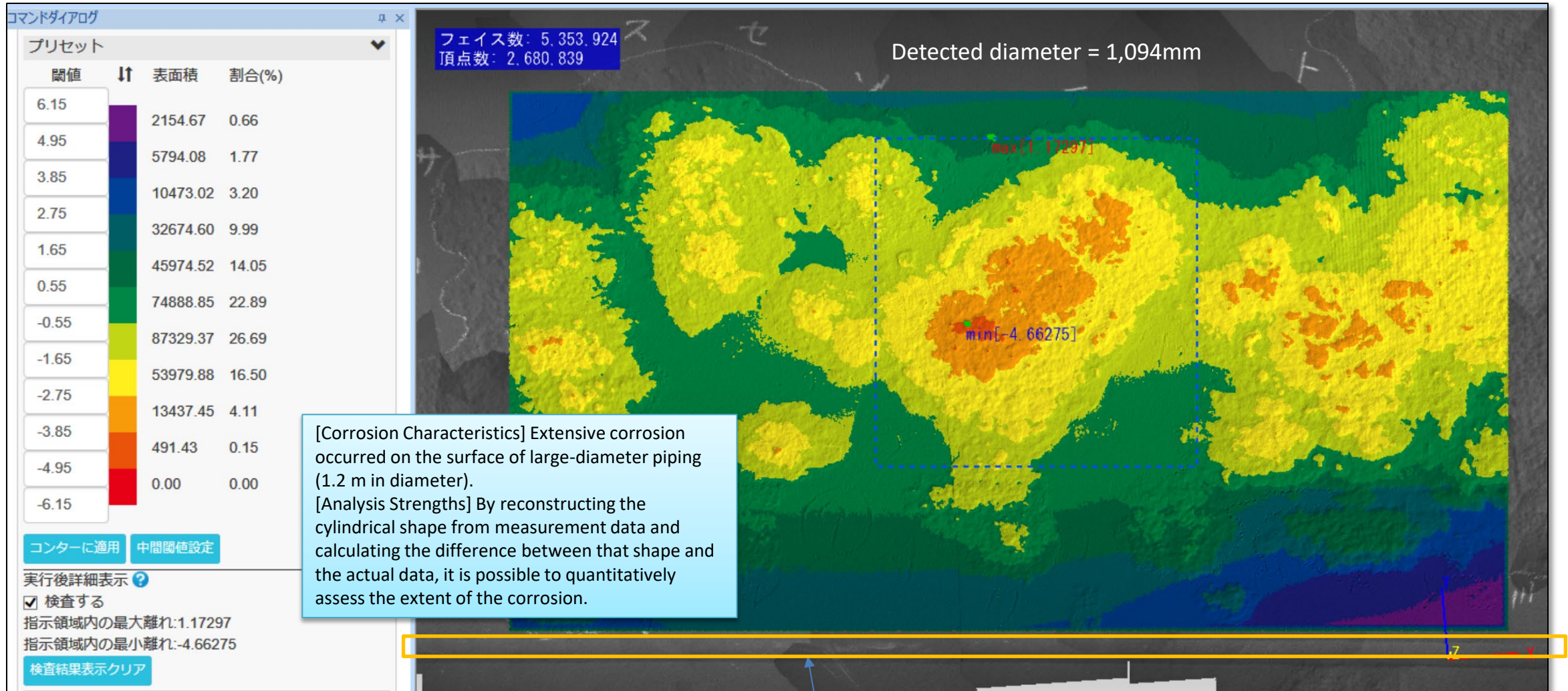
Cylindrical storage tank: bottom plate 1



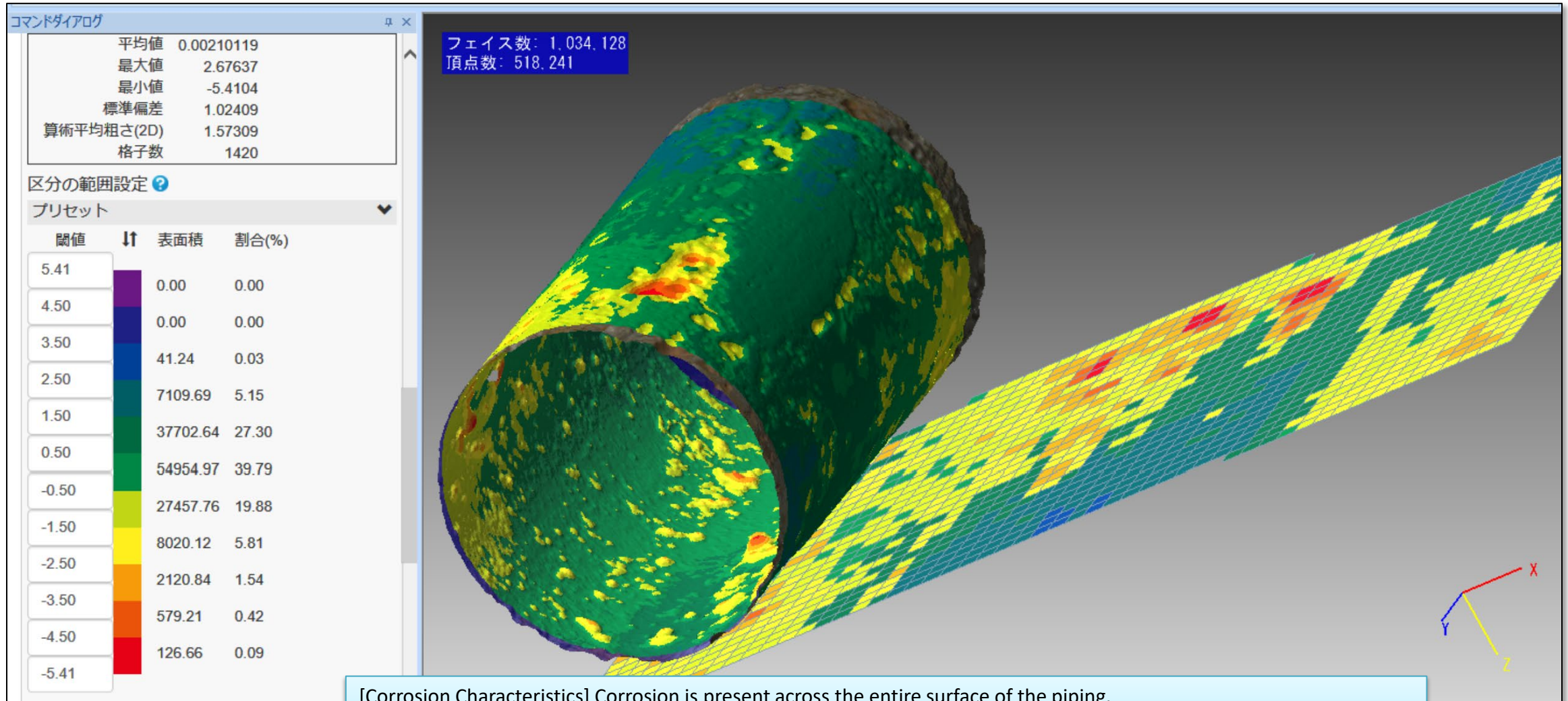
[Characteristics of Corrosion] The bottom plate is deformed due to various residual stresses present since manufacture. Furthermore, extensive pitting corrosion has developed over years of service.

[Analysis Strengths] It is possible to detect the depth of pitting corrosion on the deformed plate while eliminating the influence of the deformation itself.

Straight pipe sections, above the weld lines



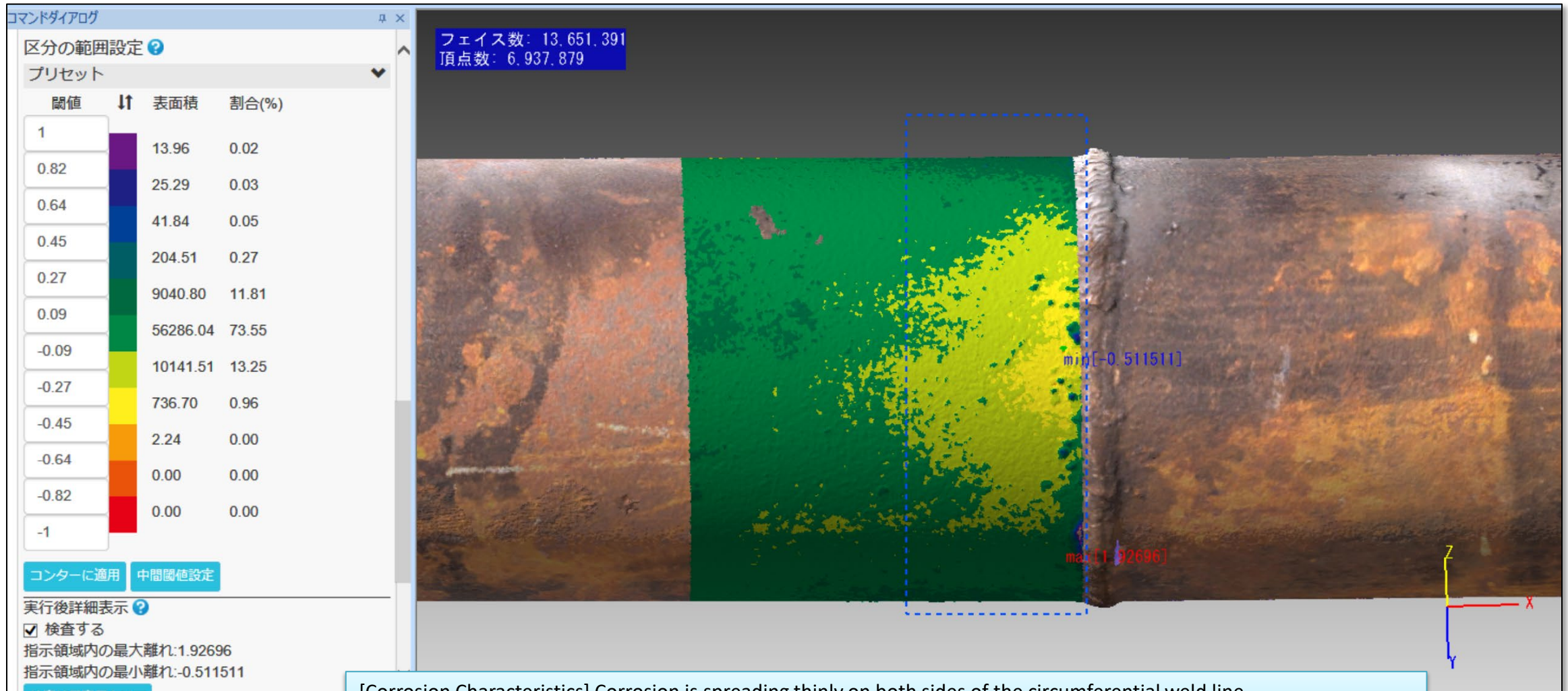
Full-circumference analysis of straight pipe sections, and heatmap display.



[Corrosion Characteristics] Corrosion is present across the entire surface of the piping.

[Analysis Strengths] By reconstructing a cylindrical shape from the measurement data and calculating the difference between that shape and the actual data, it is possible to quantitatively assess the corrosion extending around the entire circumference and map it onto a 2D heat map.

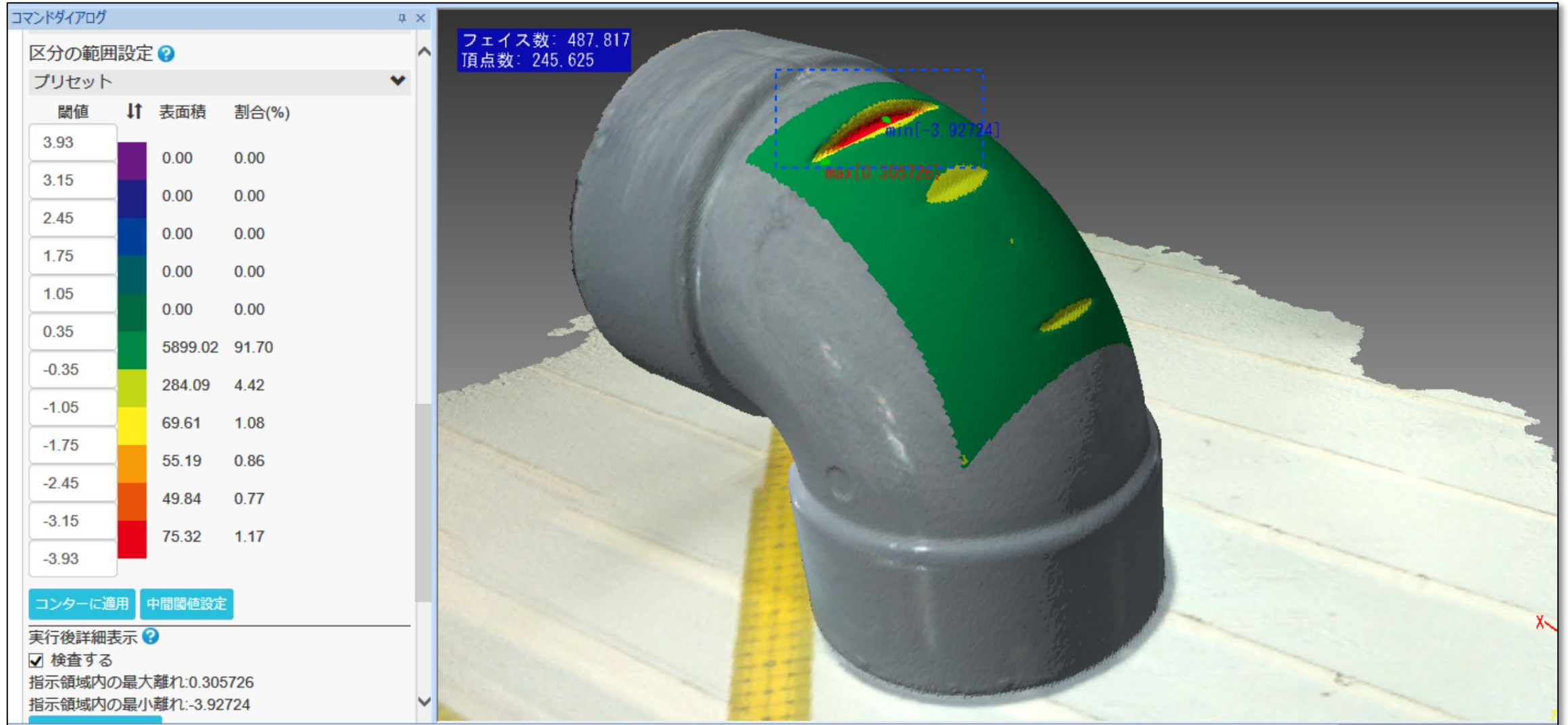
Straight pipe: Near the weld line



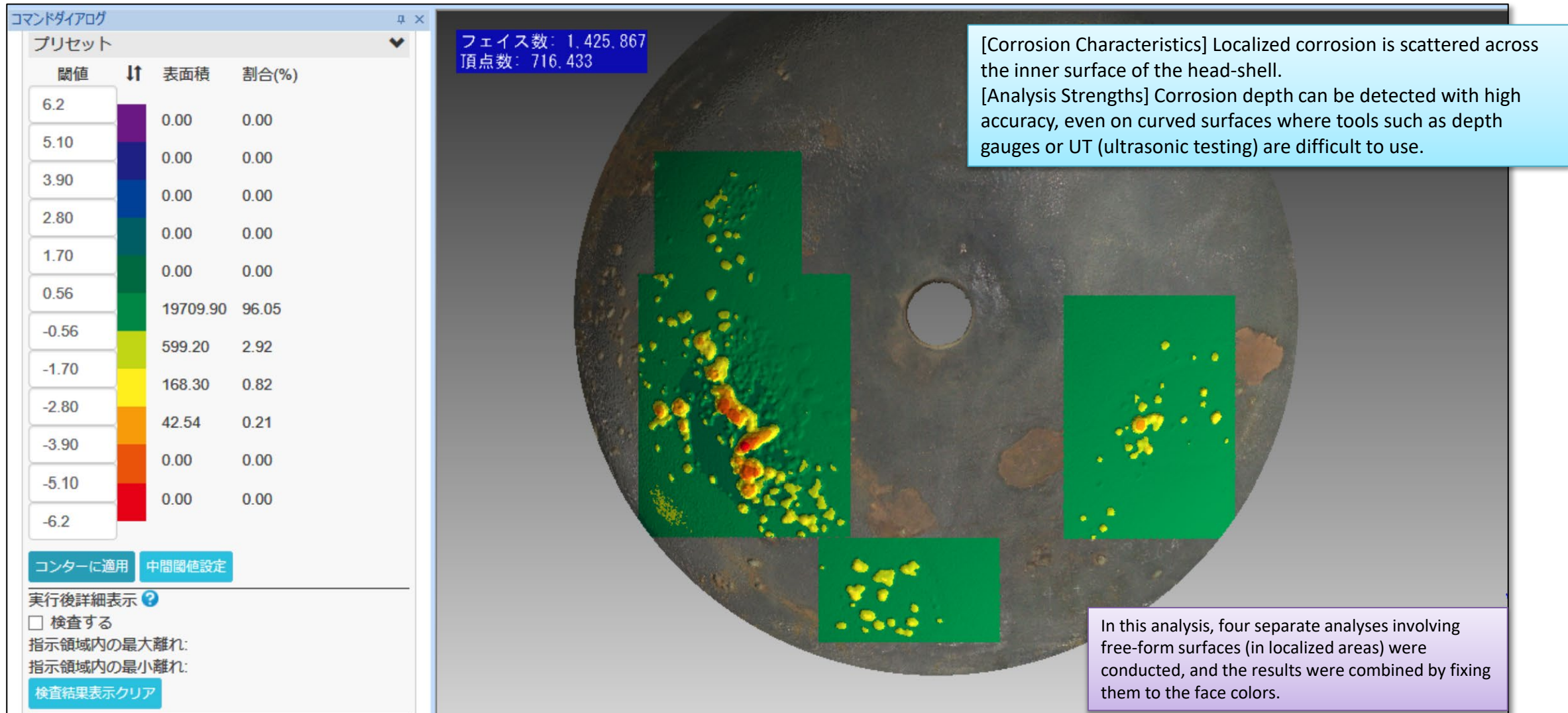
[Corrosion Characteristics] Corrosion is spreading thinly on both sides of the circumferential weld line.

[Analysis Strengths] Accurate corrosion analysis is possible even around weld lines, where tools such as depth gauges or UT are difficult to use.

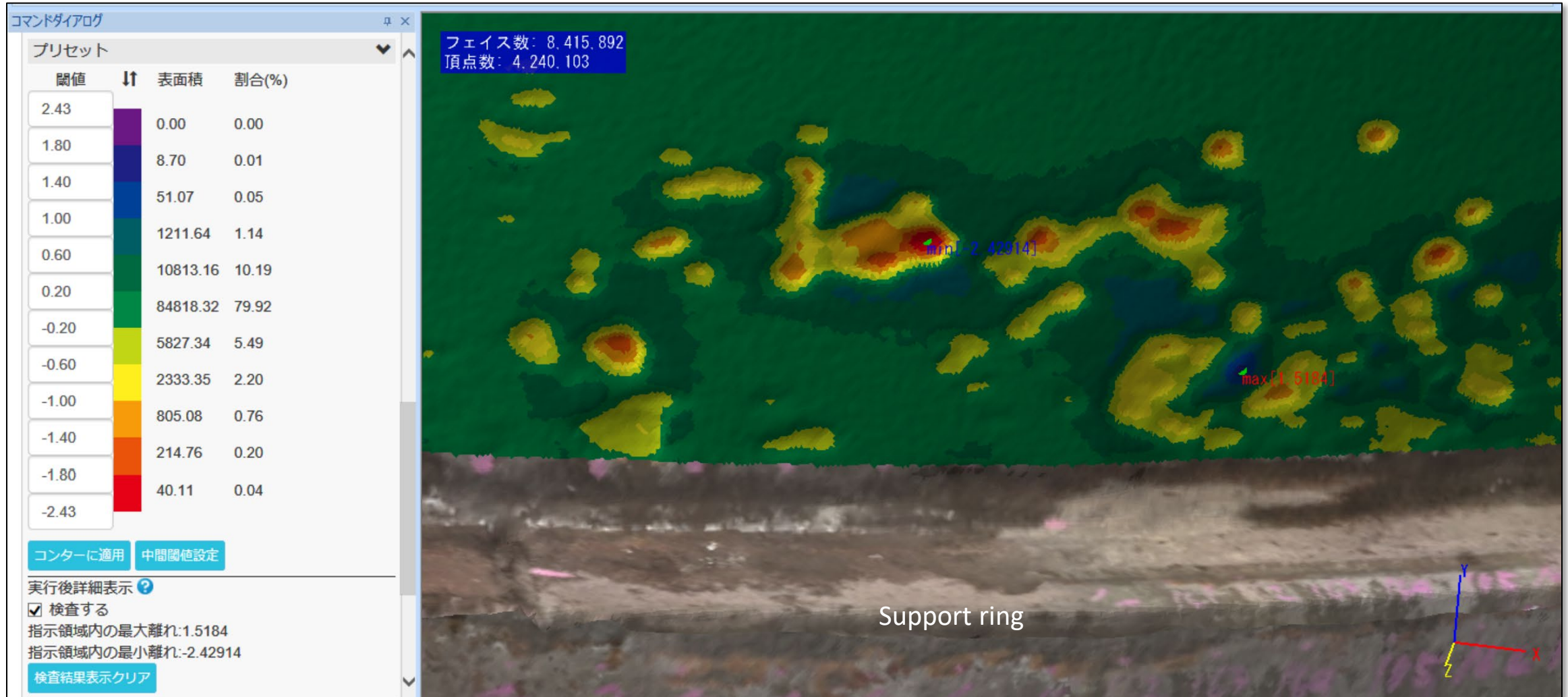
Piping: Elbow



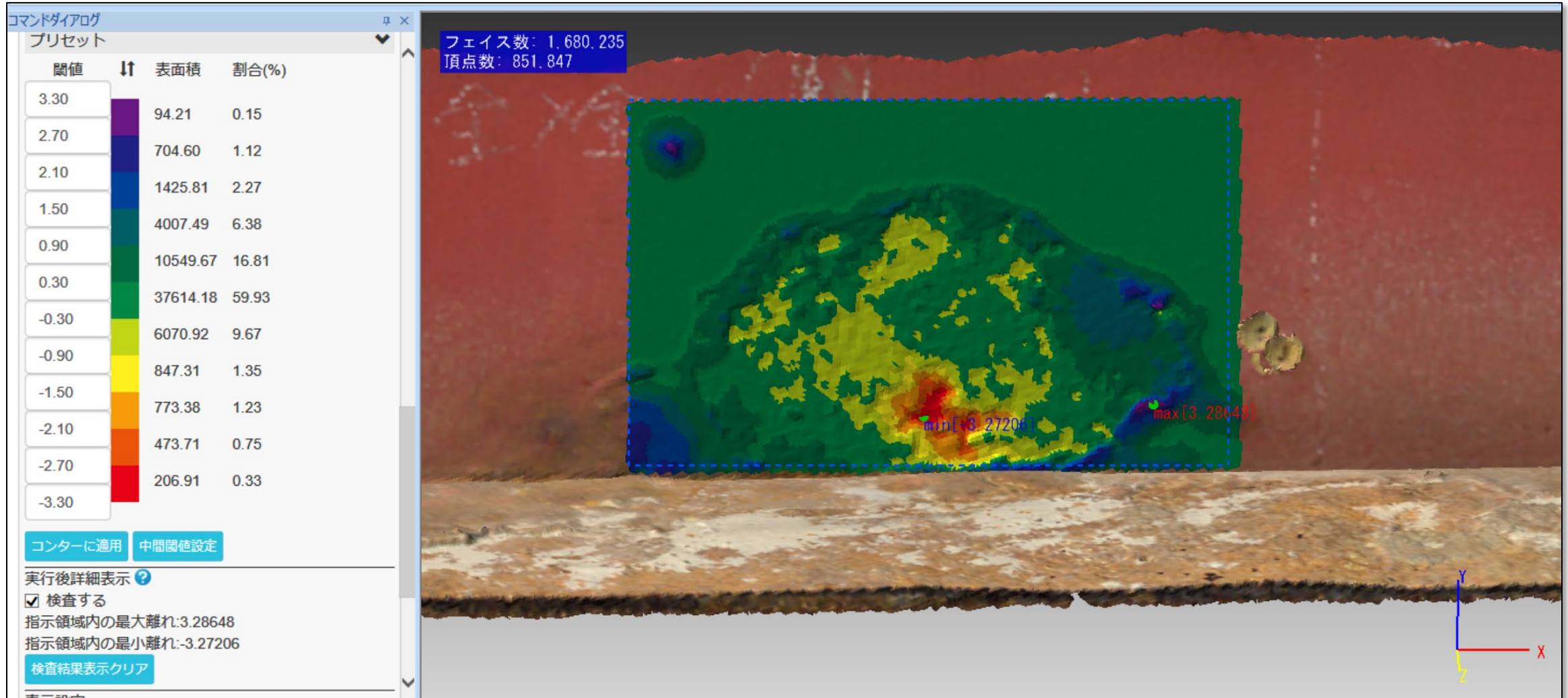
Towers and vessels: Inner surface of the head-shell



Towers and vessels: Corrosion on the side plate above the insulation support ring.



Steel bridge: Corrosion of lower sway bracing (lateral stiffeners)



Thickness of the material

