1 what is the serial number of the device? **SN 2024-S1-347 , machine commissioned 01/2025 ( 5 months old machine )**

2 what error has occurred? **Zirconia bridge chipping on margins. ICAM project, video documentation, STL files, ISO files attached.**

**This issue appears during milling more on less from the beginning of the machine commissioning.**

**Description of the issue:**

* **When milling zirconia Bridge with ICAM 10, very visible and significant chipping on margin happens ( see the video attached, file name ICAM HD 10.mp4 )**
* **When milling same STL, from same zirconia, on same machine, calculated in Hyperdent 9.4.4, chipping is minimal ( see the video attached, file name HYPERDENT 9\_4\_4.mp4 )**
* **All conditions between tests were same ( tests conducted several times, with same results )**
* **Customer has issue with Zirconia chipping from the early beginning of the machine installation**

**I have attached HYPERDENT self contained project file ( HDPROJZ ) from both ICAM HD 10 and Hyperdent 9.4.4 ( named ICAM HD10 and HYPERDENT 9\_4\_4 for easy to understand )**

**I have also attached the calculated ISO files from both projects.**

**STL with construction info also attached ( Exocad as a CAD )**

**I have checked the calculated ISO files from ICAM 10 and HYPERDENT 9.4.4 and the visible difference is in step “Margin Line Finishing”, where ICAM 10 uses step MARGIN LINE FINISHING D1 (T14) (5X BOSS FINISHING) and HYPERDENT 9.4.4 uses ;9: MARGIN LINE FINISHING D1 (T14) (3D EQUIDISTANT FINISHING). So my assumption, but I do not say it is the root cause of the issue, is that 5X margin line finishing causes this problem.**

**ALL FILES ( videos, projects, stl files, iso files ) you can download from my Google Drive here:**

[**https://drive.google.com/file/d/1zUw2HbOG\_K6dUbz\_Of6xYYSsf6Ai2Q1B/view?usp=sharing**](https://drive.google.com/file/d/1zUw2HbOG_K6dUbz_Of6xYYSsf6Ai2Q1B/view?usp=sharing)

3 what is the Team Viewer ID of the device? **1 766 687 242**

7 when was the machine last calibrated? **Yes, fully calibrated before every test ( WZP calibration, 5x calibration, runned several rounds and all resuls with maximum devation of 10um ) Also we did a service check according to maintanance Schedule for 150i PRO machine – measured backlash on XYZ ( OK, backlash +- 5um on all axis ), A axis aligned, machine lubed, Belt OK and tensioned OK, checked reference switches, checked spindle concentricity,checked tool probe, updated SW to latest, NOT checked the Spindle Turning Speed , calibrated several times with repeating results in reasonable range of few um differences )**

8 when was the collet chuck last serviced? **Collet replaced with fresh new unused collet, clean and tightened by original imes icore torque wrench**

9 what additional steps were taken to correct the fault? **All we know from service training. We also recalculated the same case on different CAM ( Hyperdent 9.4.4 for IMES 150i PRO, which has different strategies, than supplied ICAM HD 10 ) and then milled on SN 2024-S1-347. Results are very different. And as we have not found any mechanical issue with the machine, we think, it is a CAM issue**

10 who carried out the last maintenance? What is the last maintenance date? **05/2025, authorized service technician, CAD CAM DENT, by me**

11 imes-icore CAD parameters**? Standard CAD parameters as usual. Verified the file can be milled OK on other machines ( Coritec 150i PRO M 2.1 with HD 9.4.4 , UP3D P55D, DOF Craft 5X, all result in perfect margin finish )**

12 imes-icore CAM software (software version?) **ICAM HD based on hyperdent 10.0.2 RC**

13 imes-icore milling tools? **Yes. New tools used for test. Original Imes Icore tools.**

14 imes-icore blanks? **No. Customer does not mil from Imes Icore blanks. But we did different test on provided prettau blank and the result was similar ( chipping on margin )**

15 which CAM is used? **ICAM HD based on hyperdent 10.0.2 RC**

16 which materials are used? **Kuraray Noritake Dental Inc. KATANA YML Multilayer discs**

17 which tools are used? **Original Imes Icore tools. 2 / 1 / 0.6 used for the tests.**