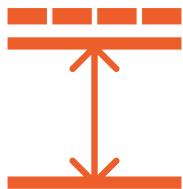


MATERIAL PLUS

A PACE TECHNOLOGIES PRODUCT

This module is specific for Decarburization



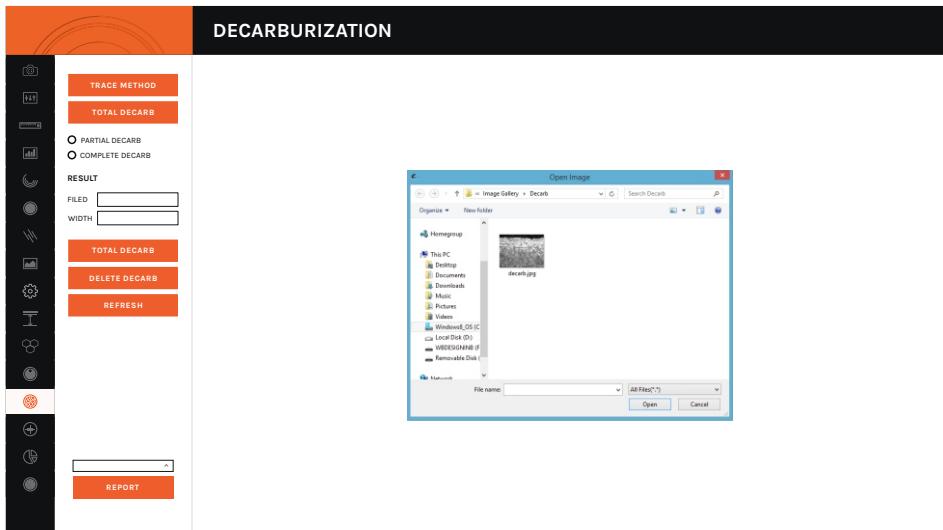
DECARBURIZATION

ABOUT THE DECARBURIZATION

Spheroidizing is a form of heat treatment for iron - based alloys, commonly carbon steels, in order to convert them into ductile and machinable alloys. It is conducted at temperatures that are slightly below the eutectoid temperature, following by a slow cooling process. The resulting spheroidite structure is a microstructure that contains sphere- like cementite particles. Spheroidite is known as the most ductile and machinable form of steel. The spheroidization of cementite at subcritical and intercritical temperatures is studied quantitatively by evaluation of a shape factor for the cementite particles. The degree of spheroidization is determined by the values of the shape factor.

1st Step

Fig-86



Load the image to be analyzed. Select the appropriate saved calibration available on the status bar in the drop down list to perform analysis on the image

2nd Step

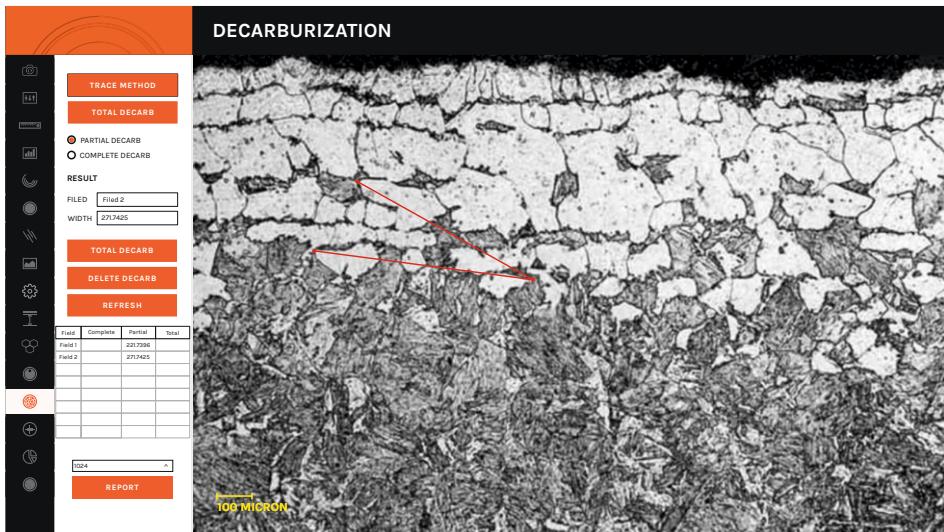
Choose a tap according to your need, the available method are 1. Complete Decarb 2. Partial Decarb 3. Total Decarb. Activate **Complete Decarb**. Draw line from starting to the end point of complete decarb.



Fig-87

3rd Step

Fig-88



Activate **Partial Decarb**. Draw a line from the starting to the end point partial decarb. Click on **Total Decarb**. Total of both gets display in the result window for field 1.

4th Step

If you need to know only completed decarb, activate **Complete Decarb**. Draw one or more lines on the complete decarb layer.

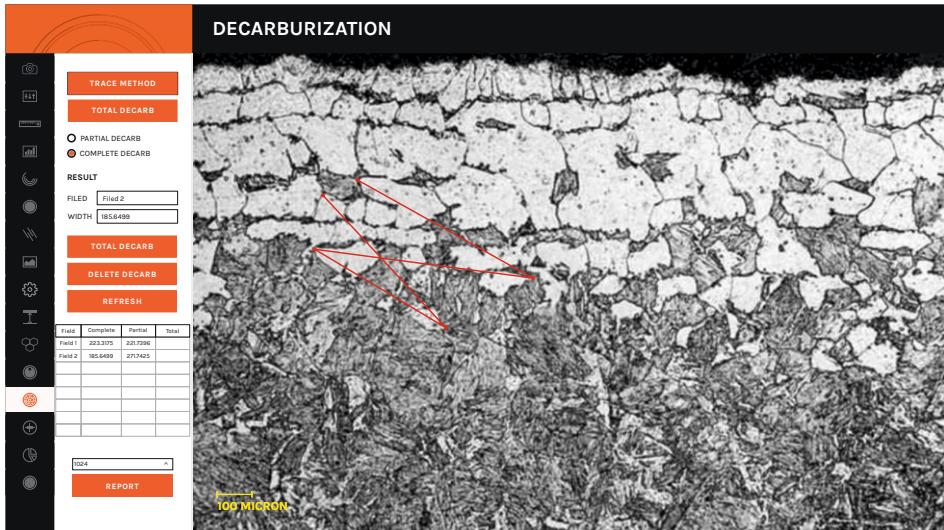
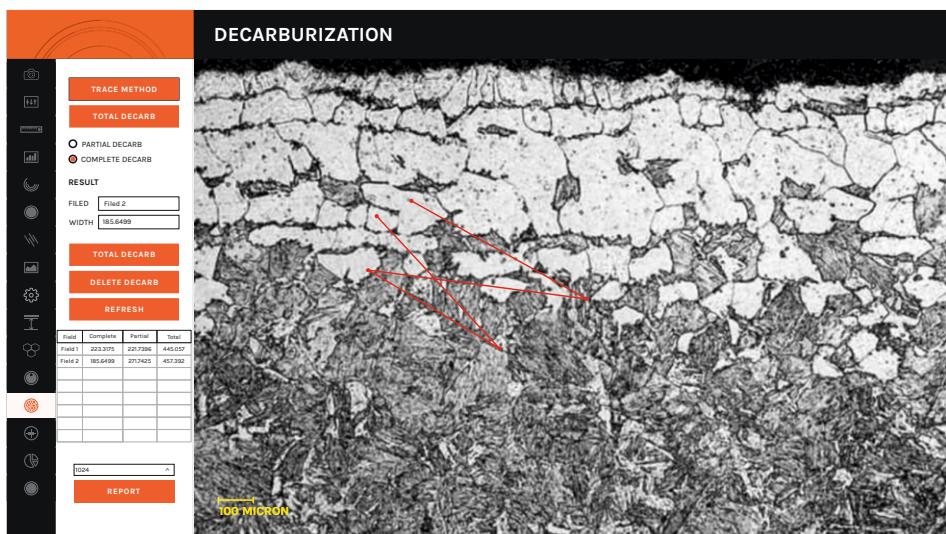


Fig-89

5th Step

Fig-90



To open the analysis in Microsoft Excel, Click on **REPORT**

6th Step

Click on **REPORT** button, message box will ask whether you want to study another field or analysis another captured image. Press **YES** for next picture. Otherwise press **NO**.

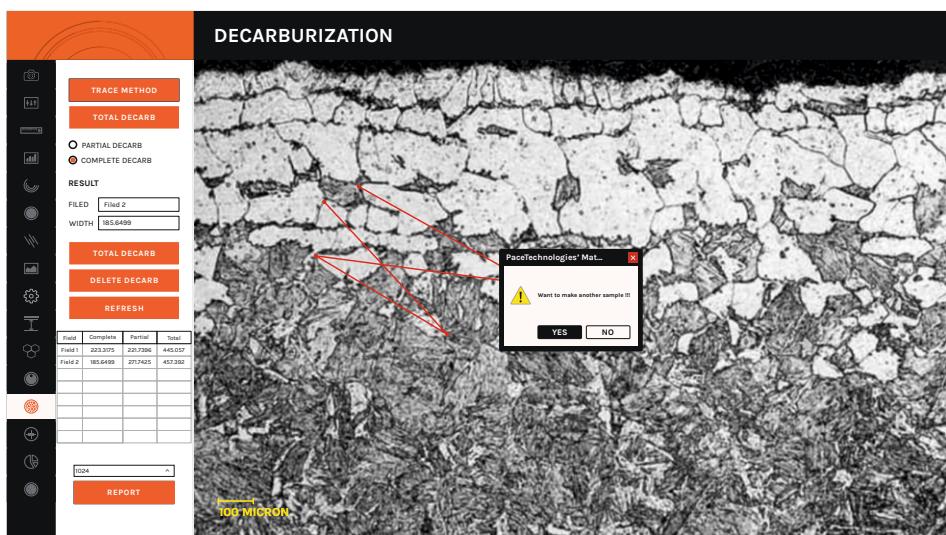


Fig-91

RESULT ARE AVAILABLE IN EXCEL IN A-4 SIZE

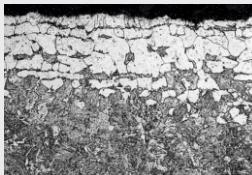
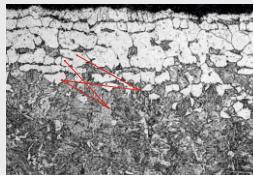
DECARBURIZATION REPORT					
CUSTOMER NAME :	Dewinter Optical Inc.		PART NAME:	Seamless Pipe	
EVALUATION DATE :	2016-09-08-14-39-53		PART NO.:	223	
REPORT NO.:	223		MATERIAL GRADE:	223	
DRAWING NO.:	—		SUPPLIER HEAT QTY.:	—	
SUPPLIER HEAT NO.:	—		BATCH NO.:	—	
INVOICE NO./QTY.:	—		COLOR CODE :	—	
DECARBURIZATION REPORT - ASTM E562 & E1245					
Etched Image					
Processed-Etched Image					
Fields	Partial Decarb		Complete Decarb		Total Decarb
Field 1	221.739681		223.317557		445.057
Field 2	271.742532		185.649918		457.392
Remarks					
Approved By					

Fig-92