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## Steel Plates Faults Data Set

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**Abstract:** A dataset of steel plates' faults, classified into 7 different types. The goal was to train machine learning for automatic pattern recognition.

<b>Data Set Characteristics:</b>	Multivariate	<b>Number of Instances:</b>	1941	<b>Area:</b>	Physical
<b>Attribute Characteristics:</b>	Integer, Real	<b>Number of Attributes:</b>	27	<b>Date Donated</b>	2010-10-26
<b>Associated Tasks:</b>	Classification	<b>Missing Values?</b>	N/A	<b>Number of Web Hits:</b>	19339

### Source:

Semeion, Research Center of Sciences of Communication, Via Sersale 117, 00128, Rome, Italy.  
[www.semeion.it](http://www.semeion.it)

### Data Set Information:

Type of dependent variables (7 Types of Steel Plates Faults):

1. Pastry
2. Z\_Scratch
3. K\_Scratch
4. Stains
5. Dirtiness
6. Bumps
7. Other\_Faults

### Attribute Information:

27 independent variables:

X\_Minimum  
 X\_Maximum  
 Y\_Minimum  
 Y\_Maximum  
 Pixels\_Areas  
 X\_Perimeter  
 Y\_Perimeter  
 Sum\_of\_Luminosity  
 Minimum\_of\_Luminosity  
 Maximum\_of\_Luminosity  
 Length\_of\_Conveyer  
 TypeOfSteel\_A300  
 TypeOfSteel\_A400  
 Steel\_Plate\_Thickness  
 Edges\_Index  
 Empty\_Index  
 Square\_Index  
 Outside X Index

Edges\_X\_Index  
Edges\_Y\_Index  
Outside\_Global\_Index  
LogOfAreas  
Log\_X\_Index  
Log\_Y\_Index  
Orientation\_Index  
Luminosity\_Index  
SigmoidOfAreas

## Relevant Papers:

- 1.M Buscema, S Terzi, W Tastle, A New Meta-Classifer, in NAFIPS 2010, Toronto (CANADA), 26-28 July 2010, 978-1-4244-7858-6/10 ©2010 IEEE
- 2.M Buscema, MetaNet: The Theory of Independent Judges, in Substance Use & Misuse, 33(2), 439-461, 1998

## Citation Request:

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