

# EVALUATION AND ANALYSIS VARIOUS TYPES OF WELDING IMPERFECTIONS COLLECTED FROM THE INDUSTRIAL FABRICATORS

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## **ABSTRACT**

- The purpose of this project is to evaluate and analyze the welding imperfections that were collected from the welding industries and steel fabricators.
- >Welding imperfection may occur due to lack of welding skill and incorrect welding conditions.
- >Some of these imperfections are classified as defect or reject.
- >The cost of repair can be more expensive than making new.
- >Prevention is better and cheaper but the correct knowledge is necessary.
- >The samples are analyzed based on the code of practice, by visual inspection, ndt and macro etching test.
- ➤ The detailed chart of welding imperfections is published:
  - Description of imperfections
  - Causes and remedies.
  - •Macrograph, photograph, radiograph and sketches.

#### INTRODUCTION

- ➤ Welding imperfection is a physical in-homogeneity at the weldment (weld metal, HAZ, base metal).
- >Serious imperfection on a weld may lead to product failure, financial loss, property damage, personal injury.
- >Imperfection becomes defect or reject when it exceeds the acceptance limit specified in codes or standard.
- > Defects can be classified as crack, cavity, solid inclusion, lack of fusion and penetration, imperfect shape and miscellaneous imperfections.
- ➤ Crack is a dangerous defect, some can be repaired, some cannot be repaired.

#### **OBJECTIVE**

- Objectives of this project are:
  - To collect various types of welding imperfection from the welding industries
  - To analyze the causes of welding imperfection.
  - To propose the corrective remedies for welding imperfection based on the latest knowledge in welding technology
  - To evaluate the samples of welding imperfection by vusual, ndt and dt
  - To display the types of welding imperfection / defect in sketch, photograph, radiograph and macrograph.

## **METHODOLOGY**

SEARCHING COMPANY

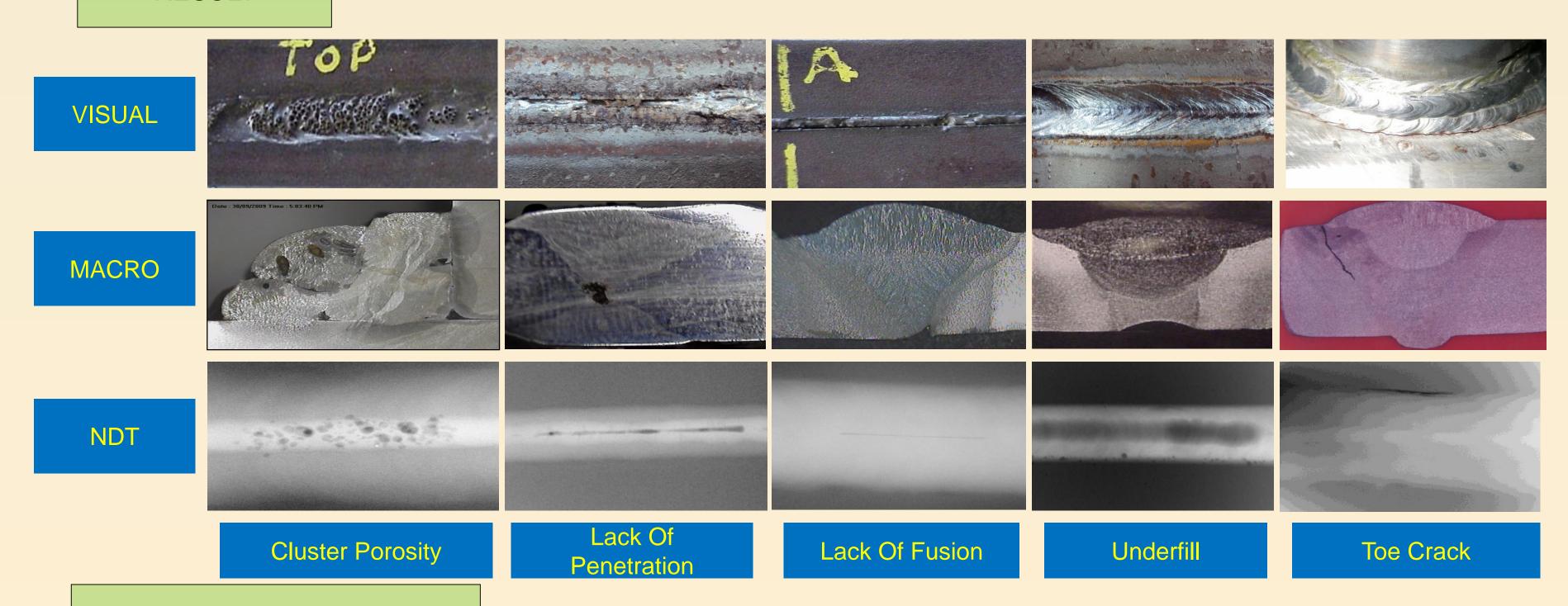
COMMUNICATION

VISIT COLLECT SAMPLE

EVALUATION AND ANALYSIS

**DOCUMENTATION** 

### RESULT



#### DISCUSSION / CONCLUSION

- >Welding imperfections on display chart is good for educational purpose.
- >A wide range of welding imperfections are shown in sketch, photograph, radiograph and macrograph
- >The welding imperfection is best learned by repeated observation on many types of samples.