

Presentation

by Iwan CostelloDowns

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Industrial Project

Dust Extraction Line Upgrade –
Iwan Costello-Downs

Project Background and Definition

- ISO 50001 and ISO 14001:2015
- Energy Saving via VFD than Star – Delta
- *Insert Pic of Extraction system and old panel*

Project Constraints

- Must be completed by April
- Impact of Covid
- Lead Times
- Scope Creep

Functional Design Specification

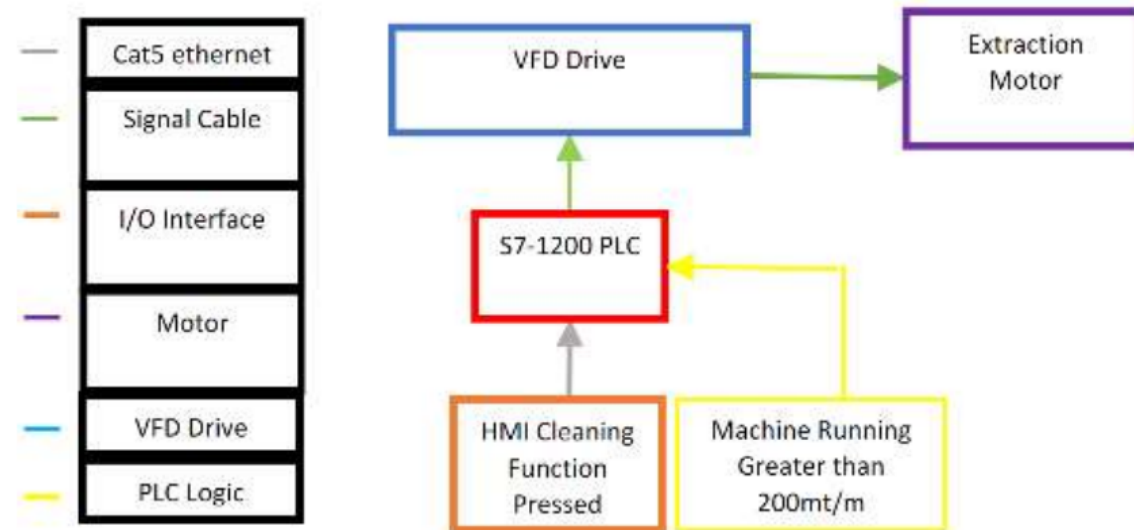
Reference	Criteria
1.1	The new solution must use a VFD drive to replace the star-delta starter.
1.2	The new solution must be monitored for energy saving feedback to review its performance.
1.3	The original control panel for start/stopping the extraction motor must be removed.
1.4	The start/stopping of the motor must be controlled via an I/O module under the line operator panel.
1.5	The dust extraction running mode should still engage at 200mt/m when the machine is running therefore the remaining wiring and code should still allow this after the modification.
1.6	The HMI must display when the motor is running.
1.7	The cleaning function must be engaged by keeping the extraction running 1 minute after the machine stops.
1.8	The cleaning function must be displayed on the HMI and last for 15 minutes after activation.

Test Planning

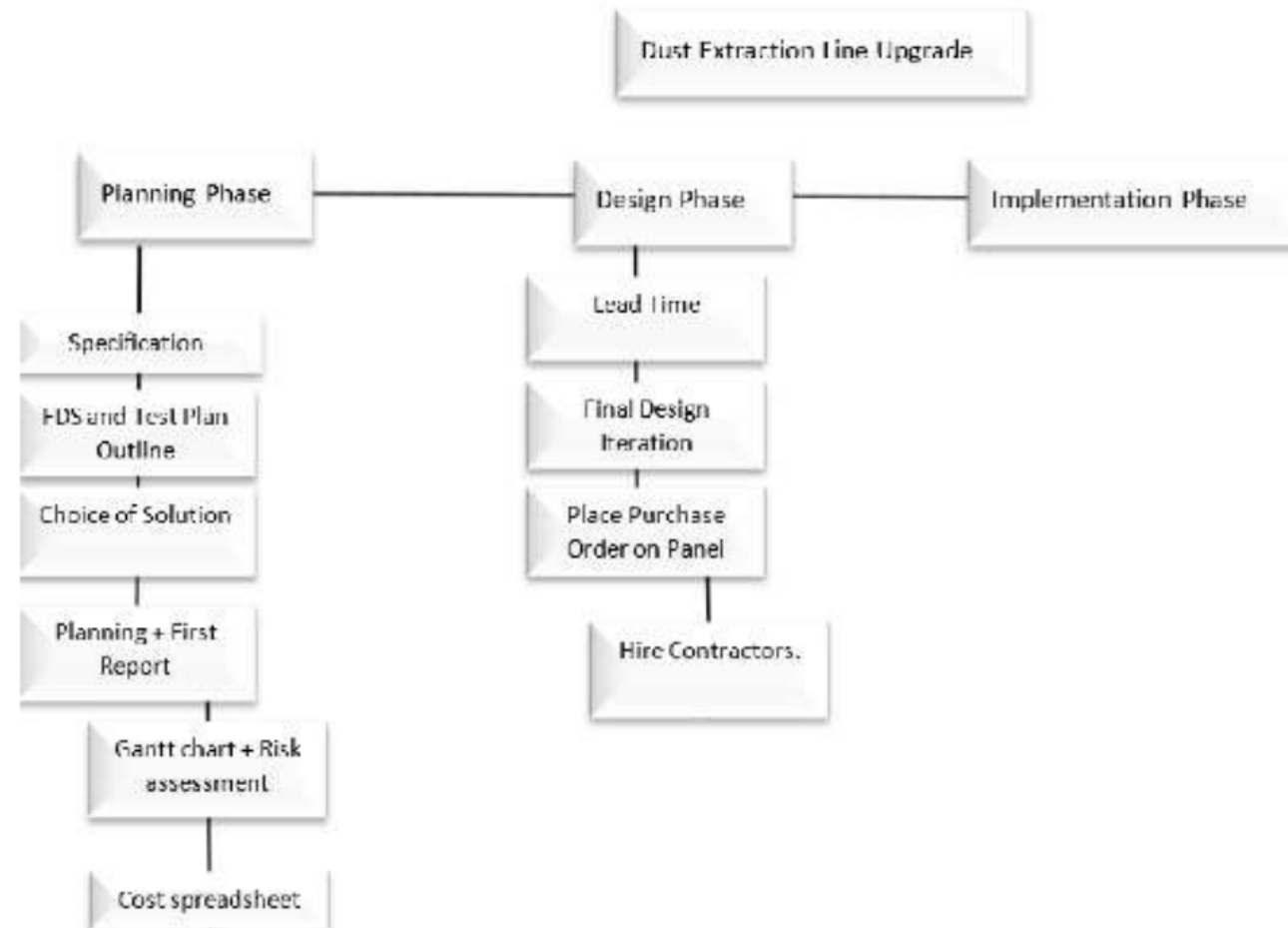
- Factory Acceptance Test

Reference	Description of test	Expected result	Actual result	Pass/fail
1.2	Energy readings taken pre and post installation.	Energy consumption will be less.	Energy consumption is less than previous solution.	Pass
1.5	Run the machine at over 200mt/m.	Extraction motor should start.	Extraction motor starts.	Pass

Review of 3 Solutions



Project Planning and Management Techniques



Progress Made to Date

- Planning Phase completed
- Contractors Hired
- Software and drawings acquired.

Presentation

GRADEMARK REPORT

FINAL GRADE

GENERAL COMMENTS

Instructor

43/100

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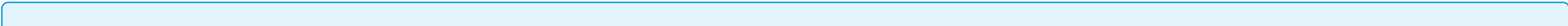
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1. ENGAGEMENT WITH LITERATURE

2. KNOWLEDGE AND UNDERSTANDING

 Project background and problem definition (4/10) Project constraints, risks, health and safety (4/10)
Response to questions (5/10) Total = 13/30

13

3. COGNITIVE AND INTELLECTUAL

 Functional Design Specification (6/10) Test planning (6/10) Project Planning and management
methods (4/10) Total = 16/30

16

4. PRACTICAL APPLICATION

 Review of Solutions (4/10) Justification of final solution (2/10) Total = 6/20

6

5. TRANSFERABLE SKILLS

 Quality of the presentation slides (4/10) Quality of the delivery style (4/10) Total = 8/20

8