American Axle & Manufacturing

Asian Equipment Spec Manual Initiative Project

Project Introduction

- Capital Procurement Process Flow

Written Purchase Specification is furnished when capital purchase needed → Send RFQ to suppliers → Receive Quotes and review Tech Eval & Price Comparison → Complete Cost Analysis and Place Purchase Order

EQUIPMENT SPECIFICATION MANUAL- SPECIAL MACHINES

Project Introduction

- Objective

To create AAM Asian Spec Manual

- Substitutable Parts Selection Criteria

Low Risk — Substitutable Components — High Cost

1 .Safety & quality comes first
2 .No change to core system

1 .The severity of cost reduction
2 .Average demand

Solutions and Implementation

- Identify Substitutable Brands

Interview with employees and distributors → Control managers, and experienced distributors

Pinpoint top replaceable brands for each category → Schneider for electric control, Festo for cylinders etc.

Interview with the brands reps → Brands are more incentivized and proficient

Collect feedbacks and draft new approved list

the POWER to move the world

the POWER is our people

Solutions and Implementation

- Approach 1 Results

Press quote from TCX

AAM E-Press Budget Breakdown (In thousand)

No.	Item	Sub-Total	Comments	Estimated Cost Reduction
Irreplaceable Components	E-press	¥ 200.00	Made by TCX	N/A
	Equipment Body	¥ 150.00	Made by TCX	N/A
	MMI	¥ 30.00	Allen Bradley	N/A
	PLC	¥ 60.00	Allen Bradley	N/A
	Scanner	¥ 8.00	Symbol	N/A
	Safety Relay	¥ 9.00	Pilz	N/A
	Light Curtain	¥ 18.00	Banner	N/A
Replaceable Components	Transformer	¥ 30.00	Allen Bradley	¥ 27.00
	Relay,fuse,breaker,power supply	¥ 90.00	Schneider etc.	¥ 8.00
	Panel	¥ 24.00	Rittal	¥ 12.00
	Control box	¥ 8.00	Rittal	¥ 4.00
	Swing arm	¥ 8.00	Rittal	¥ 4.00
	A/C	¥ 3.00	Rittal	¥ 3.00
	Sensor	¥ 6.00	Balluff	¥ 2.00
	Tax	¥ 35.00	Others	¥ 3.00
Other Expenses	Tooling	¥ 90.00	Made by TCX	N/A
	Protective measures	¥ 12.00	Made by TCX	N/A
	Design	¥ 10.00	Others	N/A
	Management	¥ 10.00	Others	N/A
	achage,transportation,insurance	¥ 10.00	Others	N/A
	installation,debug	¥ 25.00	Others	N/A
Total Expenses		¥ 790.00		

Summary

*Original Cost	¥ 790,000.00
Replaceable Parts Cost	¥ 103,000.00
Replaceable %	13%
Est. Cost Red	¥ 67,000.00
Est. Cost Red %	8.5%

Why only 8.5%

- Limited replaceable components
- E-press expense

Solutions and Implementation

- Outlook

Build a virtual station with info gathered → Justify the severity of cost reduction with solid prove

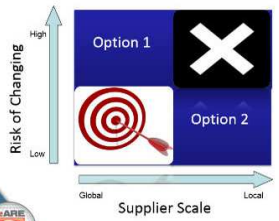
Turn in evaluation report and ask for approval → More info needed excepting cost reduction. E.g. Durability, quality, warranty, after-sale service

Implement the strategy with real projects → The best way to justify the outcome and collect information

Create AAM Asian Component Approved List

Project Relay and Recommendations

- About The Goal



- Option 1
  1. Vertical coordination required within AAM
  2. Significant cost saving
  3. High risk of incompatibility
- Option 2
  1. Knowledge of local market
  2. Uncertainty of cost savings
  3. Medium risk of machine downtime

Thanks for stopping by!!

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