

# Two Wheeler case references

Indian Market

Venkataramanan

# Summary of Reference Installations

98 Paint Robots Installed

S.No	Customer	Location	No.of. Robots	Remarks
1	Royal Enfield	Oragadam	4 X IRB580	25 variants of Sheet metal parts
2	Royal Enfield	Oragadam-2	14 X IRB5400	
3	Royal Enfield	Vallam	14 X IRB5400	
4	Royal Enfield	Vallam-2	14 X IRB5500	
5	Hero Motocorp	Halol	11 X IRB5400	Sheet metal parts of Various bikes & scooters
6	Hero Motocorp	Haridwar	3 X IRB5400	
7	Hero Motocorp	Dharuhera	3 X IRB5500	
8	Hero Motocorp	Gurgaon	3 X IRB5400	
9	Hero Motocorp	Gurgaon	10 X IRB5500	
10	MATE Chennai	Chennai	8 X IRB5400	
11	SMRC	Chennai	2 X IRB5400 2 X IRB5500	Plastic parts of Royal Enfield
12	OLA	Krishnagiri	10 X IRB5500	Plastic parts

# Case reference:1 Royal Enfield

Royal Enfield , Oragadam-First Liquid painting line with Robots (2011-12)

No.of Robots: 4 ,Robot Model: IRB580 ,Applicator: RB625

Application : 2 X IRB580 for Basecoat application & 2 X IRB580 for Topcoat application

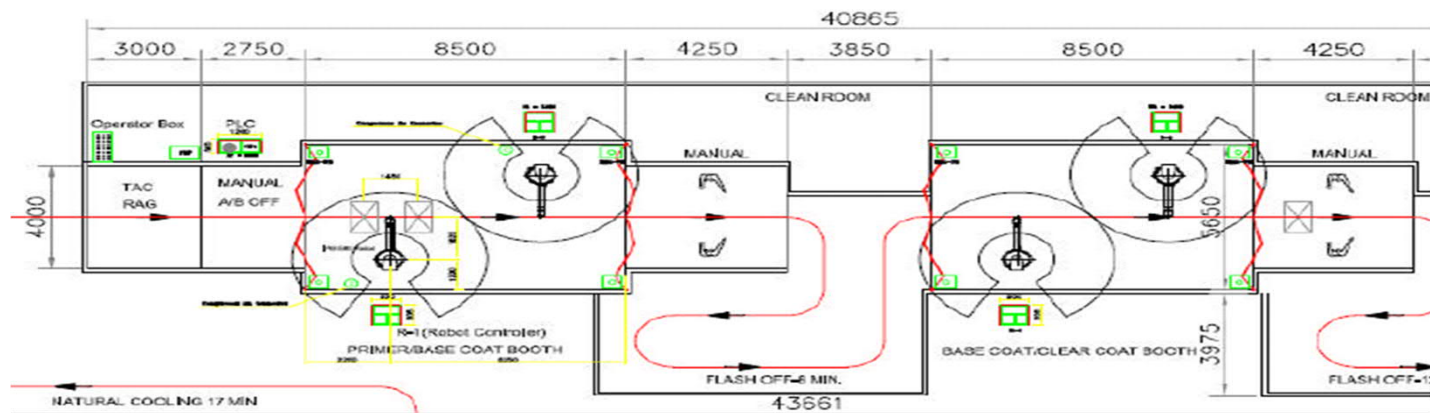
Paint type: Solvent borne -1K & 12 colors.

No.of. Components to be painted: 25 parts

Parts type: All sheet metal parts like Fuel tank, Mudguard, Tool box etc.

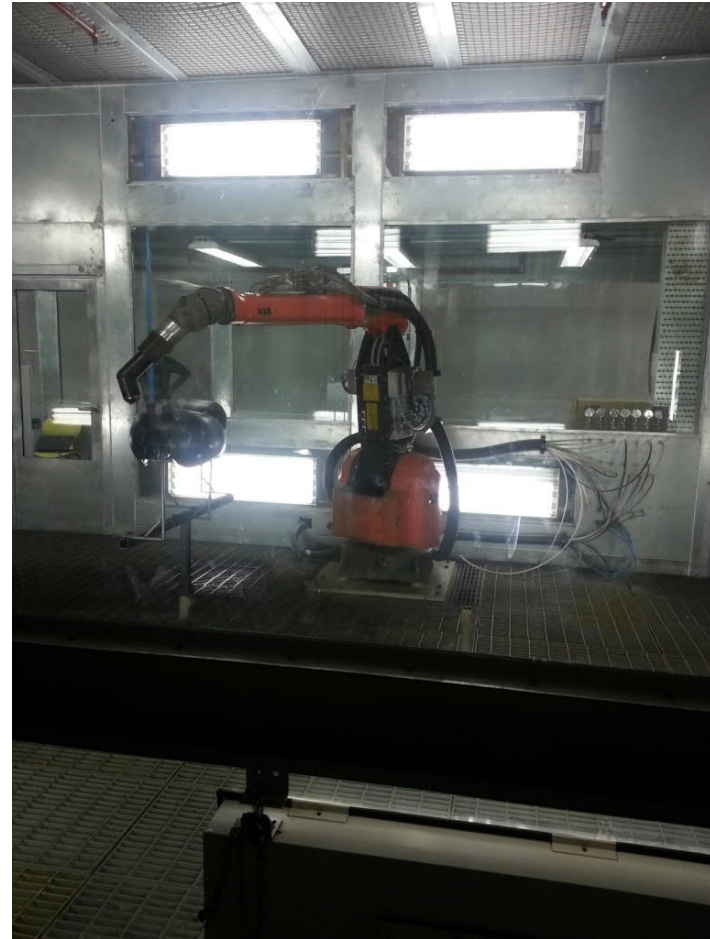
Line speed: 3m/min & Tact time: 34 secs

DFT requirement : 15-20 microns in BC & 35 microns in Topcoat



# Case reference:1 Royal Enfield

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# Case reference:2 Royal Enfield, Oragadam

Royal Enfield , Oragadam-Phase-2 (2014-15)

No.of Robots: 14 ,Robot Model: IRB5400 ,Applicator: RB1000 in BC & RB926 in TC

Application : 4 X IRB5400 for Basecoat application & 3 X IRB5400 for Topcoat application

Line:1 with 7 X IRB5400 & Line:2 with 7 X IRB5400. Total: 14 robots

Paint type: Solvent borne -1K & 18 colors.

No.of. Components to be painted: 25 parts

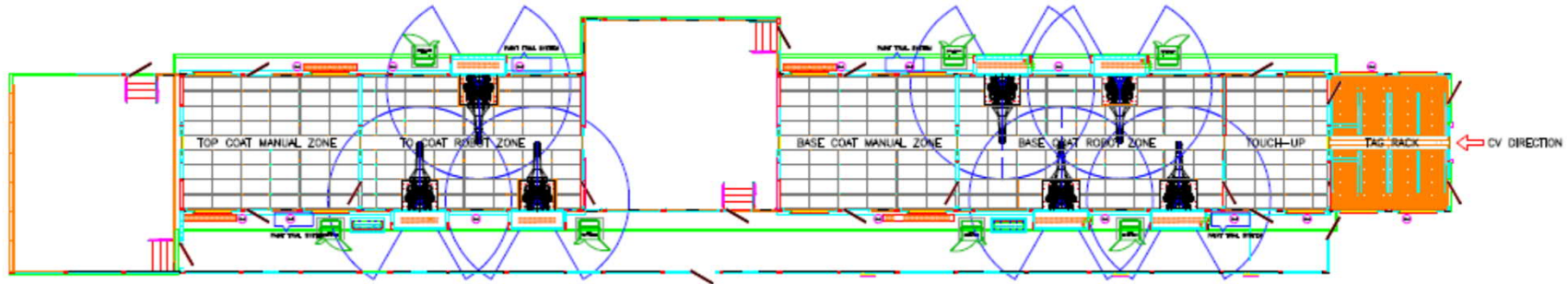
Parts type: All sheet metal parts like Fuel tank, Mudguard, Tool box etc.

Line speed: 3m/min & Tact time: 28 secs

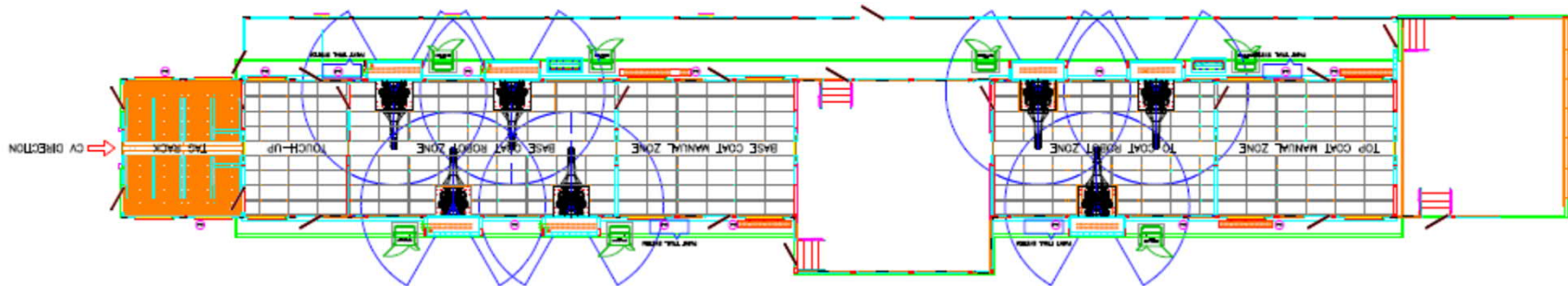
DFT requirement : 15-20 microns in BC & 35 microns in Topcoat



# Case reference: 2 Royal Enfield-Phase-2 Line (1 & 2)



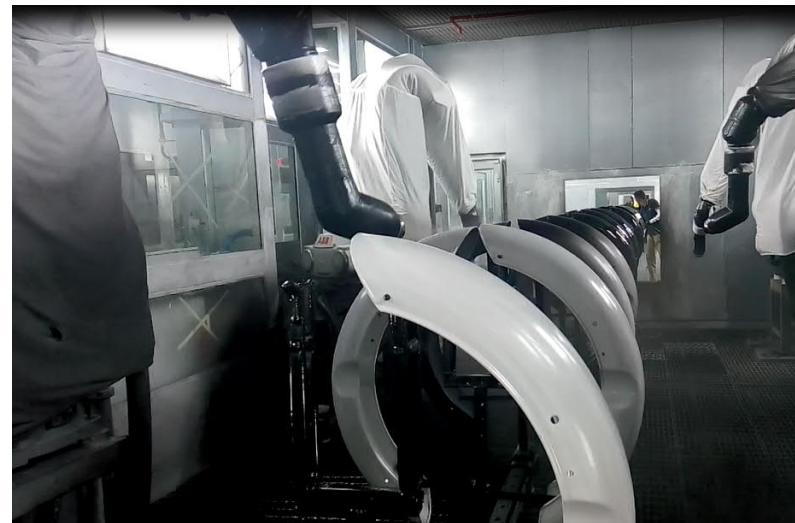
Line:1 with 7 Robots



Line:2 with 7 Robots

# Case reference:2 Royal Enfield, Oragadam

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# Case reference:3 Royal Enfield, Vallam

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Royal Enfield , Oragadam-Phase-3 (2016-17)

No.of Robots: 14 ,Robot Model: IRB5400 ,Applicator: RB1000 in BC & RB926 in TC

Application : 4 X IRB5400 for Basecoat application & 3 X IRB5400 for Topcoat application

Line:1 with 7 X IRB5400 & Line:2 with 7 X IRB5400. Total: 14 robots

Paint type: Solvent borne -1K & 18 colors.

No.of. Components to be painted: 25 parts

Parts type: All sheet metal parts like Fuel tank, Mudguard, Tool box etc.

Line speed: 3.2m/min & Tact time: 26 secs

DFT requirement : 15-20 microns in BC & 35 microns in Topcoat



# Case reference:3 Royal Enfield, Vallam

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# Case reference:4 Royal Enfield, Vallam-2

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Royal Enfield , Oragadam-Phase-3 (2018-19)- Under Engineering

No.of Robots: 14 ,Robot Model: IRB5500 ,Applicator: RB1000 in BC & in TC

Application : 4 X IRB5500 for Basecoat application & 3 X IRB5500 for Topcoat application

Line:1 with 7 X IRB5500 & Line:2 with 7 X IRB5500. Total: 14 robots

Paint type: Solvent borne -1K & 18 colors.

No.of. Components to be painted: 25 parts

Parts type: All sheet metal parts like Fuel tank, Mudguard, Tool box etc.

Line speed: 3.2m/min & Tact time: 26 secs

DFT requirement : 15-20 microns in BC & 35 microns in Topcoat

# Case reference:4 Hero Motocorp, Halol-Gujarat

Liquid Painting Line for Hero motocorp in Halol -(2015-16)

No.of Robots: 11 ,Robot Model: IRB5400 ,Applicator: RB951

Application : 3 X IRB5400 for primer, 4 X IRB5400 for BC , 4 X IRB5400 for TC.

Paint type: Solvent borne -1K & 6 colors with Pigging system

No.of. Components to be painted: 10 parts

Parts type: All sheet metal parts like Fuel tank, & Scooter parts etc.

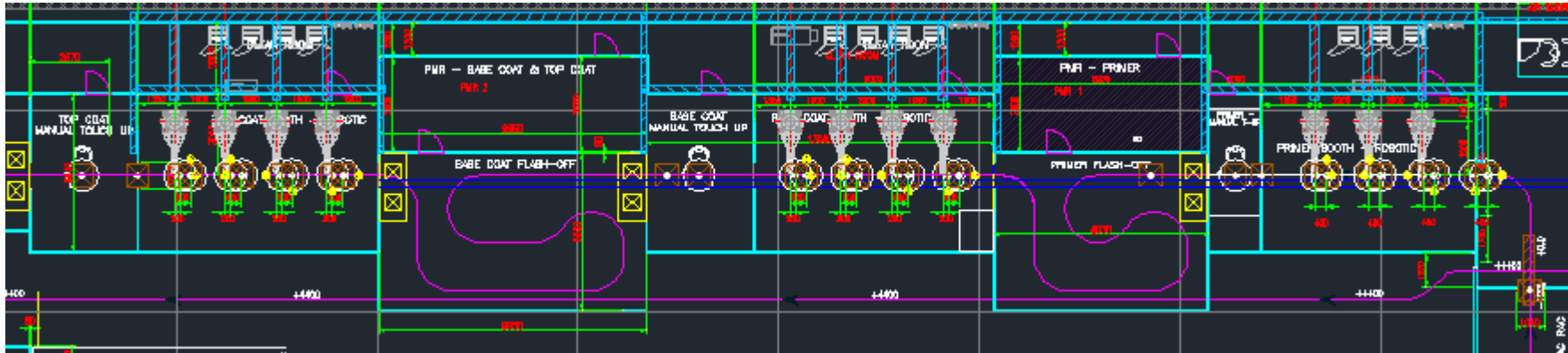
Line speed: 3.5m/min & Tact time: 14 secs

Special application: Pigging system( Special feeding system) 2 systems in Basecoat & 1 system in topcoat

Floor conveyor with 90° indexing in front of each robot.



# Case reference:4 Hero Motocorp, Halol-Gujarat





# Case reference:4 Hero Motocorp, Pigging system



Pig System Average Cycle Times at Normal Pressure Settings:

In Minutes	Viscosity	Fill	Recover	Flush	PIG SYSTEM
Red	22.2	1.2 min	3.28 min	2.52 min	CC1
Black	16.5	1.07 min	3.20 min	2.58 min	BC1
Silver	18.03	1.09 min	3.32 min	2.36 min	BC1
Clear	16.4	1.05 min	2.26 min	2.55 min	CC1

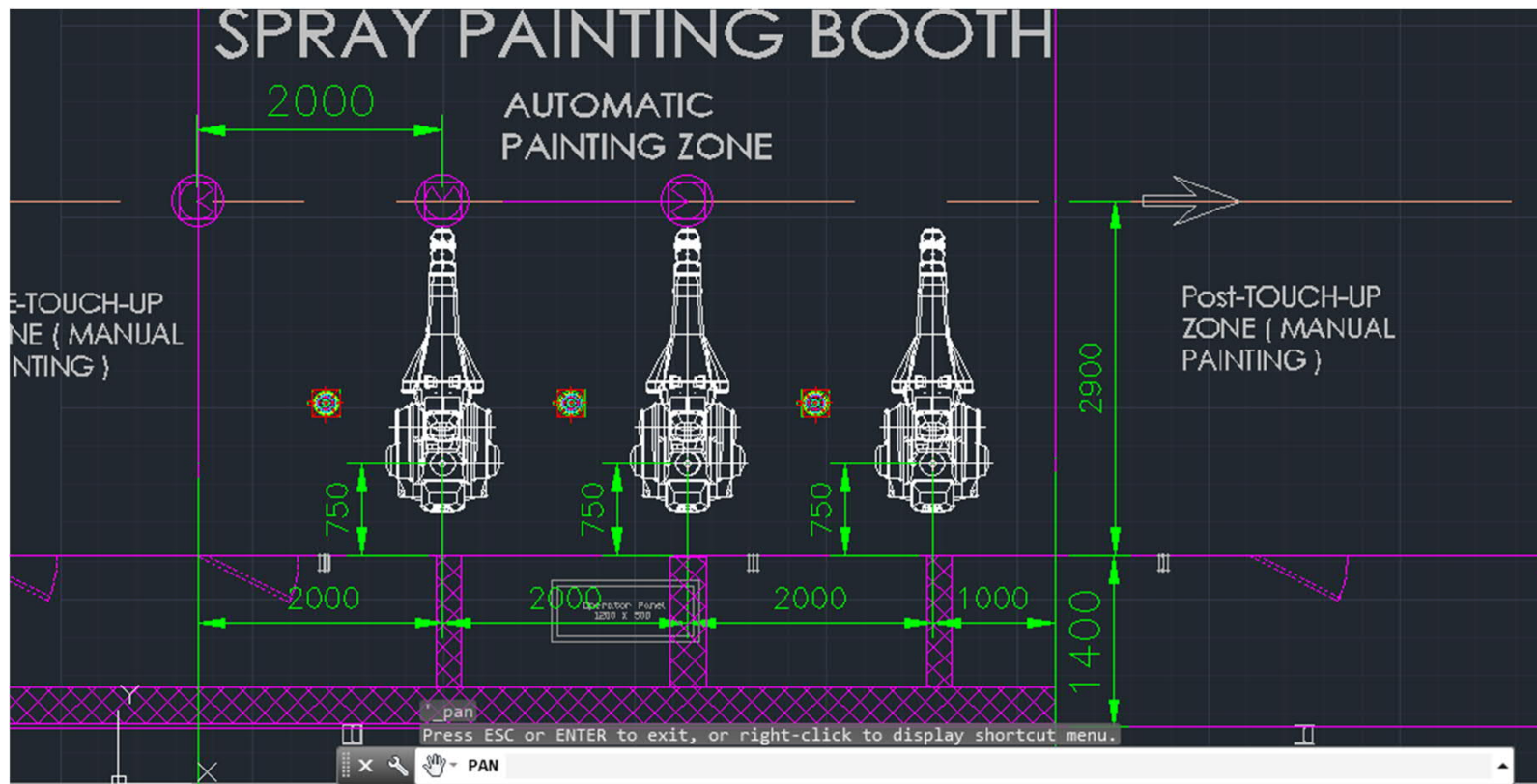
Pig System Fluid Wastage /Consumption In a cycle

Solvent	2.5-2.8 Ltr	PIG HOSE LENGTH	80mtr approx.		
Paint	0.5Ltr approx.				





# Case reference:6 Hero Motocorp, Gurgaon

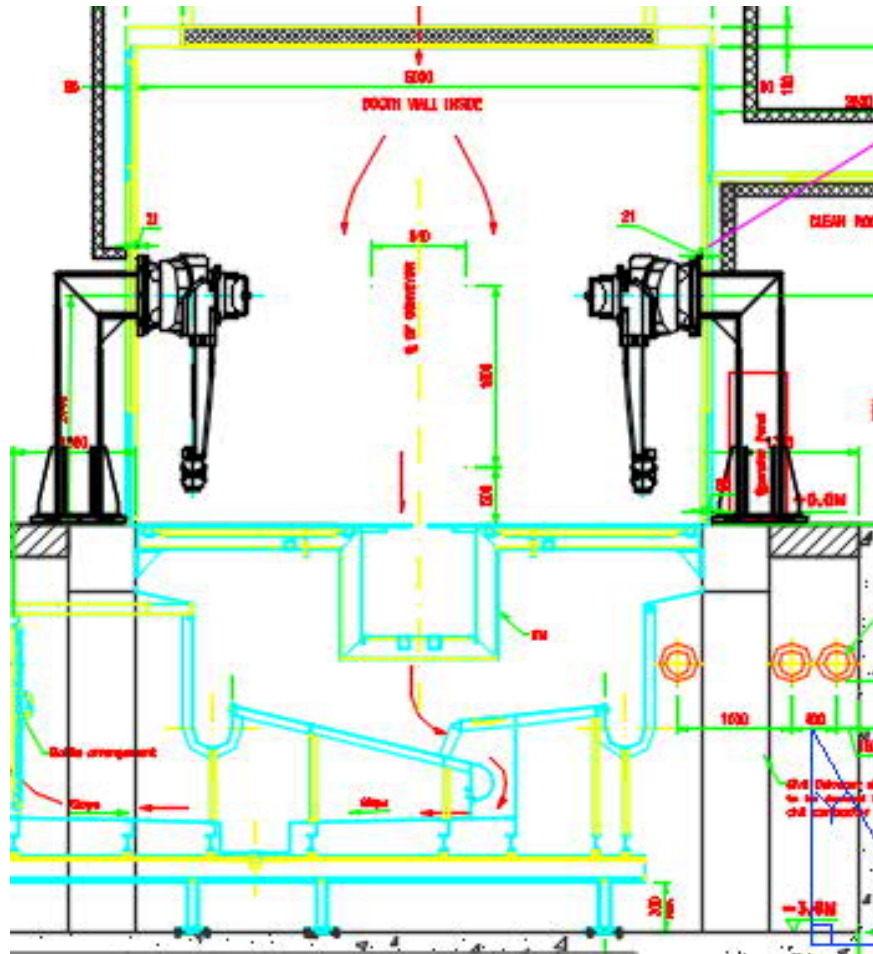


Lacquer Line for Hero motocorp in Halol -(2017)- Under installation

3 X IRB5400 floor mounted robot with RB951

3.2 m/min & 13 secs tact time, Over head conveyor with indexing

# Case reference:7 Hero Motocorp, Halol #2



- Liquid Painting Line for Hero motocorp in Halol # 2 ( Under Engineering).
- 10 X 5500 Robots with RB951 Atomizer
- Tact time: 17 secs.
- Robots in both sides of the conveyor.
- Pigging system in Base coat & TC.

# Case reference:8 MATE- Chennai (2 Wh Plastic parts)

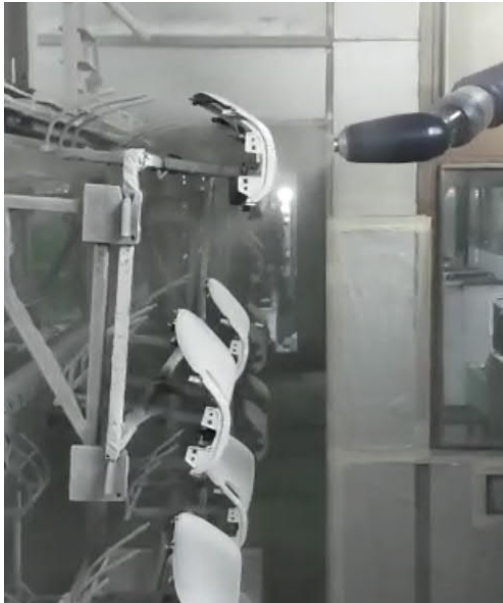
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- Painting Line for MATE, Chennai produces 2 wh plastic parts for Royal enfield & Bumpers
- 8 X IRB5400 Robots with RB1000
- Production capacity: 60 JPH
  - Conv Speed: 2.8m/min
  - Conv Pitch:2.8m
- Models Produced: Royal enfield plastic parts
- No.of colors: 6

# Case reference:9 SMRC Chennai

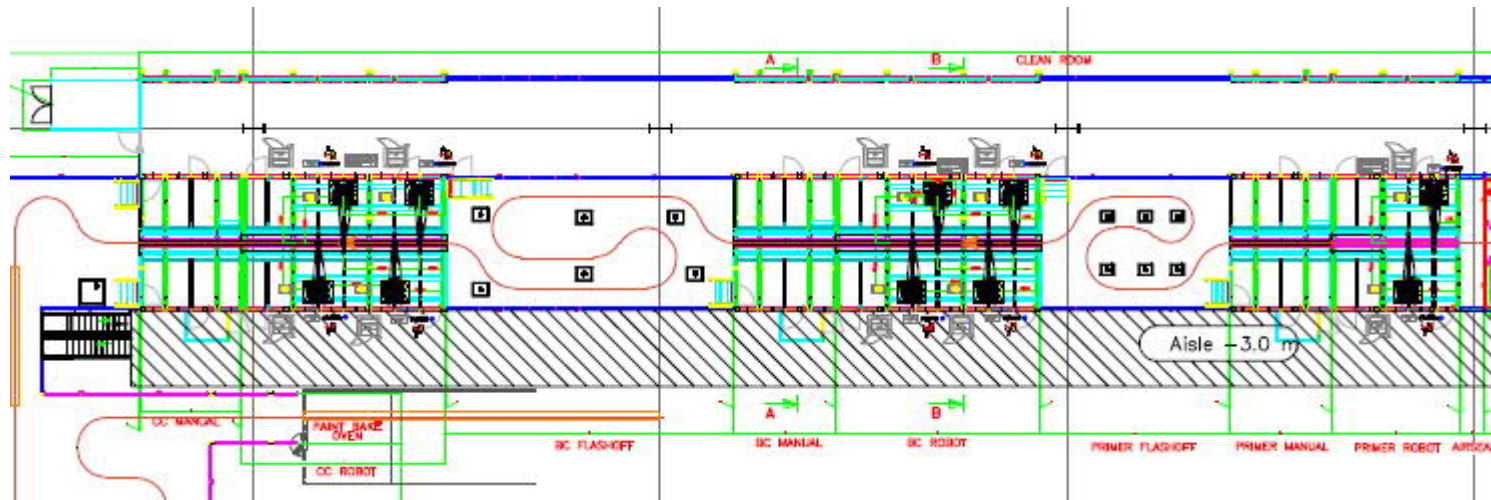
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- Painting Line for SMRC, Chennai produces 2 wh plastic parts for Royal Enfield & Instrument panels
- 2 X IRB5400 Robots with RB1000i
- 2 X IRB5500 Robots with RB1000i
- Production capacity:45 JPH
- Models Produced: Royal Enfield plastic parts & Hyundai/Nissan Instrument panels
- No.of colors: 14



# Case reference:10 OLA



- Painting Line for OLA, to produce 2 wh plastic parts
- 10 X IRB5500 Robots with RB1000i
- Production capacity: 19 secs tact time
- Models Produced: S1
- No.of colors: 10