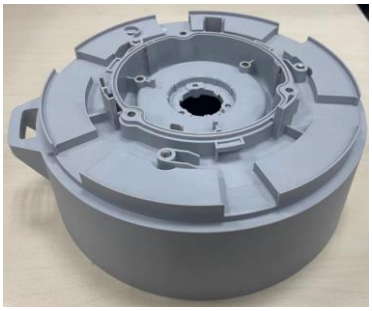
Visit Report

To	:	GUOE, JIAJ		
Cc	:	FNM, CAAG, GUOS, YAGK, LIAW, GUOC, ZHAI, XUEA, LINR, FUJT		
			Date of visit:	11 Jul. 2023
From	:	JIAJ	Date of report:	14 Jul. 2023

Lide

Participants	:	Customer	:	Mr. Xie *(P.E),* Mr. Zhou *(Processing supervisor)*
		EMS	:	J. Jin, E. Guo
OEM	:	Hikvision		
Sales responsible	:	GUOE		
Distributor	:	No		
Location	:	Hangzhou		
Application	:	Anticorrosion camera		
Segment Code	:	150		
Project number	:	150-220729-1		
Material	:	Grivory FE11898 (GVX-5HL V1)		
USP	:	Tailor-made material (UL94 V1, UV resistance)		
Potential	:	100 t/a		
SOP	:	Running		


1. Target of visit

Attend the meeting to discuss the solutions for solving/improving the yellowish issue as reqeust by customer

2. Summary

- Meeting minutes
  - Dry-blened solution can't achieve stable surface quality with exist processing condition
  - Customer agree to trial FE11898 immediately, and convince Hikvision approve it with testing data
- DOE is not going smoothly due to yellowish issue on the newly equipeed anti-corrosion screw injection machine
- Customer will re-do the DOE with FE11898 on the other IMM when it is available
- Obtain the DOE result by 20th.Jul

3. Details

- Customer mentioned the yellowish situation getting more severe with dry blend (GVX-5HL: XE11119 = 1:1) solution on the No.39 injection moulding machine which newly equipeed anti-corrosion screw

- Base on above situation, customer request EMS to attend the meeting on site to discuss the solutions for solving/ improving the yellowish.
- Meeting minutes:
  - Dry-blened solution can't achieve stable surface quality due to salty loss during dry blend action
  - Don't trial dry blend material this time
  - Lide agree to do DOE with FE11898 (Lot. 6012734/01 – higher notched impact strength) immediately on No. 39 injection moulding machine (newly epuiped anticorrsion screw), and will convince Hikvision conduct mass production with FE11898 if achieving positive DOE result
- DOE trial result:
  - The yellowish issue was also severe: processing adjustment (melt temperature, dosing speed, dosing delay,back pressure, enhenced veting) didn't work
- Then decide to trial the FE11898 grey (Lot.6013045/01 – lower notched impact strength), which been verified on No.28 injection moulding machine w/o any yellowish issue (trial supported on 29th.Jun), unfortunatly, this batch also has severe yellowish
- Base on above trial results, the screw parameters may has significant influence on the yellowish defects

	No. 39 IMM	No. 28 IMM
Machine brand	Yizumi	Yizumi
Machine size	260 ton	260
Screw diameter	60mm	60mm
Screw compression ratio	2.55	2.4
Length/ diameter	20.5:1	22:1
Special treatment	Anti-corrosion	None
Trial result	Severe yellowish	None yellowish

- Customer will re-do the DOE with FE11898 (Lot. 6012734/01) on No. 28 IMM when it is available

Part & test requirement

- Salt mist resistance (GB/T 2423.18; IEC 60068-2-52) (Corrosion-proof)
- Corrosion gases resistance (GB/T 2423.51; IEC 60068-2-60) (Corrosion-proof)
- Impact resistance (GB 3836.1-2010/ IEC 60079-0-2007) (Explosion-proof)
- Vibration test@ 0.7g acceleration speed (0.024%)
- 0.8m steel ball drop test w/o breakage (Not specified testing standard, just as products quality control)

4. Actions

No.	Action	Resp.	Due date
1	Obatin DOE testing result	JIAJ	20 Jul. 2023

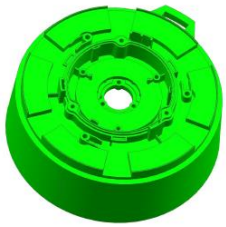
5. Attachments

Yellowish overview


Best regards,

Jason Jin

EMS	Process data injection moulding		TCS
Customer	Name		Lide
	Location		Hangzhou
	Date		11.07.2023
	Name of contact person		Tianchuan Xie
Part	Name		Housing
	Application		Anti-corrsion Camera
	Project- / TI-Number		150-220729-1 / 2022-0516S
Material	Name		Grivory FE11898 (GVX-5HL V1)
	Colour		Grey
IMM	Model name		Lide
	Clamping force	[kN]	2600
	Screw diameter	[mm]	60
	Nozzle (type/diameter)	[mm]	Open (3.5mm)
Tool	Description of tool		2 plates
	Number of cavities		1
	Sprue/runner (type/dim.)		Sprue gating
	Gate (number/type/dimensions)		1 (8mm)
	Insulating plates (yes/no)		no
Dryer	Model name		no
	Type of dryer		no
	Dew point	[°C]	
Comments			



Name	Jason Jin
Date	11.07.2023

Trial #			Comments
Material		Grivory GVX-5HL V1	
Colour		Grey C22316.1	
Lot. Nr.		6013045/01	
Barrel Temperatures			
Throat	[°C]		
Zone 1	[°C]		
Zone 2	[°C]		
Zone 3	[°C]	245	
Zone 4	[°C]	275	
Zone 5	[°C]	280	Adjustment: 250-285°C
Zone 6	[°C]	285	
Nozzle	[°C]	280	
Hot Runner			
Manifold	[°C]		
Nozzle 1	[°C]		
Nozzle 2	[°C]		
Nozzle 3	[°C]		
Nozzle 4	[°C]		
Melt Temp. measured	*[°C]*	*287*	
Tool Temperature			
Nozzle Side (NS)	[°C]	125	
Measured	*[°C]*	*122*	
Ejector Side (ES)	[°C]	95	
Measured	*[°C]*	*115*	
Slides	[°C]		
Measured	*[°C]*		
Core	[°C]		
Measured	*[°C]*		
Injection Phase			
Velocity 1 v1/s1	[%]/[mm]	35/115	
Velocity 2 v2/s2	[%]/[mm]	65/20	
Velocity 3 v3/s3	[%]/[mm]	20/18	
Max. allowed Inj. pressure	MPa	170	
Actual injection time	*[s]*	*2.9*	
Max. Injection pressure	*[MPa]*	*143*	
Hold on pressure phase			
Hold on pressure 1	[bar]/[s]	30/0.5	
Hold on pressure 2	[bar]/[s]	70/3	
Hold on pressure 3	[bar]/[s]	40/2	
Max. hold on speed	[mm/s]	20	
Switch Over			
Method	[position]	Position	
Value	[mm]	18	
Cushion	*[mm]*	*9*	
Dosing			
Metering stroke	[mm]	125	
Decompression	[mm]	5	
Screw dosing speed	[%]	60	
Back pressure	[kgf/cm²]	6	Adjustment： 2-10bar
Dosing time	*[s]*	*14*	
Dosing delay	[s]	15	
Nozzle retraction	[mm]		
Cooling time	[s]	26	
Cycle time	*[s]*	*68*	
Part weight	*[g]*	*450*	
Pre-drying	[h at °C]		Desiccant dryer is not ready, trialed with newly opened material. Moisture content is 0.05%
Moisture content	*[%]*		
Remarks			