

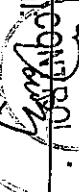


Material Test Report for SY Actuator

(In accordance with BS/EN-10204 / 3.1)

Product Name	Specimen of SY16-350 Body	Material	ASTM A536
Series No	C-180850A	Quantity	1
Order Number	6843	Inspect Date	Nov. 11th 2018
Inspect Items	Chemical Composition; Mechanical Property; Hardness; Impact Test.	Inspect Method	ASTM A370
Original No			
Heat Number	180797		
Specimen Number	/		
Test Result		Reference Value	Measured Value
C%		3.5-3.9	3.66
Si%		2.4-2.8	2.65
Mn%		max 0.5	0.32
P%		max 0.06	0.031
S%		max 0.02	0.012
NI%		/	/
Mo%		/	/
Cu%		/	/
Cr%		/	/
Nb%		/	/
σ 0.2(Mpa)		min 310	371
σ b(Mpa)		min 448	478
ψ %		/	/
δ %(50mm)		min 12	12.4
Hardness(HB)		/	166
Akv(-20°C)(J)		/	27.2
Heat treatment			
Remarks	The results above indicated are exact transcription from the corresponding certificates from our suppliers which are filed in our factory. Do not belong to the pressure C		

Inspector: Xie

Approval: 

CONTROL



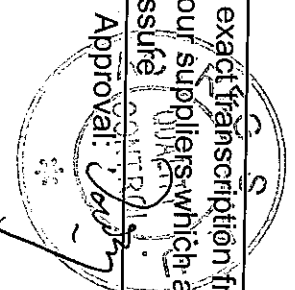
Material Test Report for SY Actuator

(In accordance with BS/EN-10204 / 3.1)

Product Name	Specimen of SY16-350 Body	Material	ASTM A536
Series No	C-180850B	Quantity	1
Order Number	6843	Inspect Date	Nov. 11th 2018
Inspect Items	Chemical Composition; Mechanical Property; Hardness; Impact Test.	Inspect Method	ASTM A370
Original No			
Heat Number	180909		
Specimen Number	/		
Test Result			
	Reference Value	Measured Value	
C%	3.5-3.9	3.64	
Si%	2.4-2.8	2.57	
Mn%	max 0.5	0.36	
P%	max 0.06	0.036	
S%	max 0.02	0.013	
NI%	/	/	
Mo%	/	/	
Cu%	/	/	
Cr%	/	/	
Nb%	/	/	
σ 0.2(Mpa)	min 310	365	
σ b(Mpa)	min 448	471	
ψ %	/	/	
δ %(50mm)	min 12	12.5	
Hardness(HB)	/	168	
Akv(-20°C)(J)	/	26.8	
Heat treatment			
Remarks	The results above indicated are exact transcription from the corresponding certificates from our suppliers which are filed in our factory. Do not belong to the pressure		

Inspector: *Nie*

Approval: *Johny*



Material Test Report for SY Actuator



(In Accordance with BS/EN-10204 / 3.1)

Product Name	Specimen of SY16-350 Adapter	Material	A350 LF6		
Series No	C-180850A-B	Quantity	2		
Order Number	6843	Inspect Date	Nov.11th 2018		
Inspect Items	Chemical Composition; Mechanical Property; Hardness; Impact Test.	Inspect Method	ASTM A370		
Original No					
Heat Number	5WB1200				
Specimen Number	/				
	Reference Value	Measured Value			
C%	max 0.22	0.15			
Si%	0.15-0.30	0.16			
Mn%	1.15-1.50	1.44			
P%	max 0.025	0.015			
S%	max 0.025	0.007			
Ni%	max 0.40	0.02			
Mo%	max 0.12	0.001			
Cu%	max 0.40	0.03			
Cr%	max 0.30	0.13			
V%	0.04-0.11	0.044			
N%	0.01-0.030	0.015			
σ 0.2(Mpa)	min360	370			
σ b(Mpa)	455-630	525			
ψ %	/	/			
δ %(50mm)	min 22	24			
Hardness(HB)	/	/			
AKv(-20℃)(J)	min 27	54.7 (-50℃)			
Heat treatment	Normalizing				
Remarks	The results above indicated are exact transcription from the corresponding certificates from our suppliers which are filed in our factory				

Inspector:

X12

Approval:





Material Test Report for SY Actuator

(In accordance with BS/EN-10204 / 3.1)

Product Name	Specimen of SY16-350 End Cap	Material	A350 LF6
Series No	C-180850A-B	Quantity	2
Order Number	6843	Inspect Date	Nov. 11th 2018
Inspect Items	Chemical Composition; Mechanical Property; Hardness; Impact Test.	Inspect Method	ASTM A370
Original No			
Heat Number	5K10012		
Specimen Number	/		
	Reference Value	Measured Value	
C%	max 0.22	0.16	
Si%	0.15-0.30	0.28	
Mn%	1.15-1.50	1.47	
P%	max 0.025	0.022	
S%	max 0.025	0.006	
NI%	max 0.40	0.01	
Mo%	max 0.12	0.001	
Cu%	max 0.40	0.01	
Cr%	max 0.30	0.02	
V%	0.04-0.11	0.041	
N%	0.01-0.030	0.011	
σ 0.2(Mpa)	min360	361	
σ b(Mpa)	455-630	523	
ψ %	/	/	
δ %(50mm)	min 22	29	
Hardness(HB)	/	/	
Akv(-20°C)(J)	min 27	44.5 (-50°C)	
Heat treatment	Normalizing S		
Remarks	The results above indicated are exact transcription from the corresponding certificates from our suppliers which are filed in our factory		

Inspector: *Xie*

Approval: *[Signature]*

CONTROL



Material Test Report for SY Actuator

(In accordance with BS/EN-10204 / 3.1)

Product Name	Specimen of Long Stud M12X325	Material	ASTM A193 B7 Ed.14		
Series No	C-180850A-B	Quantity	2		
Order Number	6843	Inspect Date	Nov.11th 2018		
Inspect Items	Chemical Composition; Mechanical Property; Hardness; Impact Test.	Inspect Method	ASTM A370		
Original No					
Heat Number	S14808				
Specimen Number	/				
Test Result					
	Reference Value	Measured Value			
C%	0.38-0.48	0.39			
Si%	0.15-0.35	0.24			
Mn%	0.75-1.00	0.76			
P%	max 0.035	0.01			
S%	max 0.04	0.014			
Ni%	/	/			
Mo%	0.15-0.25	0.18			
Cu%	/				
Cr%	0.80-1.10	0.92			
Nb%	/	/			
σ_s (Mpa)	min 720	864			
σ_b (Mpa)	min 860	1013			
ψ %	min 50	53			
δ %(50mm)	min16	16			
Hardness(HB)	max 321	240			
Akv(-20°C)(J)	min 27	72			
Heat treatment	Quenching & Tempering air cooling				
Remarks	The results above indicated are exact transcription from the corresponding certificates from our suppliers which are filed in our factory				

Inspector: Xie

Approval: J. Wang

Material Test Report for SY Actuator



(In accordance with BS/EN-10204 / 3.1)

Product Name	Specimen of SY16-350 Piston RodΦ35X365	Material	ASTM A193 B7 Ed.14																																																			
Series No	C-180850A-B	Quantity	2																																																			
Order Number	6843	Inspect Date	Nov.11th 2018																																																			
Inspect Items	Chemical Composition; Mechanical Property; Hardness; Impact Test.	Inspect Method	ASTM A370																																																			
Original No																																																						
Heat Number	X14908191																																																					
Specimen Number	/																																																					
<table border="1"> <thead> <tr> <th></th><th>Reference Value</th><th>Measured Value</th></tr> </thead> <tbody> <tr> <td>C%</td><td>0.38-0.48</td><td>0.38</td></tr> <tr> <td>Si%</td><td>0.15-0.35</td><td>0.24</td></tr> <tr> <td>Mn%</td><td>0.75-1.00</td><td>0.763</td></tr> <tr> <td>P%</td><td>max 0.035</td><td>0.013</td></tr> <tr> <td>S%</td><td>max 0.040</td><td>0.003</td></tr> <tr> <td>Ni%</td><td>/</td><td></td></tr> <tr> <td>Mo%</td><td>0.15-0.25</td><td>0.16</td></tr> <tr> <td>Cu%</td><td>/</td><td></td></tr> <tr> <td>Cr%</td><td>0.80-1.10</td><td>1.03</td></tr> <tr> <td>Nb%</td><td>/</td><td>/</td></tr> <tr> <td>σ s(Mpa)</td><td>min 720</td><td>938</td></tr> <tr> <td>σ b(Mpa)</td><td>min 860</td><td>1075</td></tr> <tr> <td>ψ%</td><td>min 50</td><td>55</td></tr> <tr> <td>δ%(50mm)</td><td>min16</td><td>17</td></tr> <tr> <td>Hardness(HB)</td><td>max 321</td><td>248</td></tr> <tr> <td>AKv(-20℃)(J)</td><td>min 27</td><td>70</td></tr> </tbody> </table>					Reference Value	Measured Value	C%	0.38-0.48	0.38	Si%	0.15-0.35	0.24	Mn%	0.75-1.00	0.763	P%	max 0.035	0.013	S%	max 0.040	0.003	Ni%	/		Mo%	0.15-0.25	0.16	Cu%	/		Cr%	0.80-1.10	1.03	Nb%	/	/	σ s(Mpa)	min 720	938	σ b(Mpa)	min 860	1075	ψ%	min 50	55	δ%(50mm)	min16	17	Hardness(HB)	max 321	248	AKv(-20℃)(J)	min 27	70
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Heat treatment	Quenching & Tempering air cooling																																																					
Remarks	The results above indicated are exact transcription from the corresponding certificates from our suppliers which are filed in our factory																																																					

Inspector:

A.C

Approval:



Material Test Report for SY Actuator

(In accordance with BS/EN-10204 / 3.1)

Product Name	Specimen of SY16-350 Pneumatic Cylinder 1160X278	Material	A350 LF6		
Serial No	C-180850A-B	Quantity	2		
Order Number	6843	Inspect Date	Nov.11th 2018		
Inspect Items	Chemical Composition; Mechanical Property; Hardness; Impact Test.	Inspect Method	ASTM A370		
Original No					
Heat Number	6205610				
Specimen Number	/				
Test Result					
	Reference Value	Measured Value			
C%	max 0.22	0.16			
Si%	0.15-0.30	0.29			
Mn%	1.15-1.50	1.36			
P%	max 0.025	0.014			
S%	max 0.025	0.005			
Ni%	max 0.40	0.01			
Mo%	max 0.12	0.001			
Cu%	max 0.40	0.02			
Cr%	max 0.30	0.03			
V%	0.04-0.11	0.042			
N%	0.01-0.030	0.011			
σ 0.2(Mpa)	min360	376			
σ b(Mpa)	455-630	515			
ψ %	/	/			
δ %(50mm)	min 22	30.5			
Hardness(HB)	/	/			
Akv(-20°C)(J)	27	169			
Heat treatment	Normalizing				
Remarks	The results above indicated are exact transcription from the corresponding certificates from our suppliers which are filed in our factory				

Inspector: *Nie*

Approval: *Jerry*

Material Test Report for SY Actuator



ACTAREG


(In accordance with BS/EN-10204 / 3.1)

Product Name	M12 nut	Material	ASTM A194(G)2H Ed.14	
Serials No	C-180850A-B	Quantity	2	
Order Number	6843	Inspect Date	Nov.11th 2018	
Inspect Items	Chemical Composition; Mechanical Property; Hardness; Impact Test.	Inspect Method	ASTM A370	
Original No				
Heat Number	X14901853			
Specimen Number	/			
	Reference Value	Measured Value		
C%	min 0.40	0.46		
Si%	max 0.40	0.23		
Mn%	max 1.00	0.62		
P%	max 0.040	0.01		
S%	max 0.050	0.002		
NI%	/			
Mo%	/			
Cu%	/			
Cr%	/			
V%	/			
σ_s (Mpa)	/			
σ_b (Mpa)	/			
$\psi\%$	/			
$\delta\%$ (50mm)	/			
Hardness(HB)	to 1.5 in or M36	248~327// ≥ 179 (tempered)	283	
	over 1.5 in or M36	212~327// ≥ 147 (tempered)	/	
AKV(-20°C)(J)	/			
Heat Treatment	Quenching & Tempering, air cooling.			
Remarks	The results above indicated are exact transcription from the corresponding certificates from our suppliers which are filed in our factory.			

Inspector: *Xie*Approval: *16007*

Test Report of SY Actuator

(BS/EN-10204 / 3.1.)

			
Order No	6843	Type	SY01F16-350SR4-NC
Series No	C-180850A-B	Quantity	2
Date	Nov. 11th 2018	Standard	BS/EN-10204 / 3.1.

Pressure&Leakage Test

Items	Test Pressure (Bar)	Holding Time (S)	Result
Pressure Test	12	180	Qualified
Leakage Test	8	60	Qualified

Torque Test Air Supply: 5 Bar

Spring Return	Air Break	2673	Spring Break	2654
	Air Running	1359	Spring Running	1338
Double Acting	Air End	1684	Spring End	1666
	Start Clockwise		Running Clockwise	
	Start Anti-clockwise		Running Anti-clockwise	

Dimension Inspect as per drawing No: SY01F16-350SR4 NC

Dimension of Flange coupling valve	Overall Diameter(D)	Φ210	Qualified
	Face Diameter(F)	Φ130	Qualified
	Bolt hole Diameter(C)	Φ165	Qualified
Pinion Hole	Quantity of Bolt hole	4-M20	Qualified
	Diameter(d)	Φ60	Qualified
	Width of Keyway(B)	4-18	Qualified
Control plate mounting dimension	Bolt Hole Position(X,Y)	100X60 100X60	Qualified
	Quantity & Diameter(Mz)	8-M6	Qualified
Limit Switch mounting dimension	Bolt Hole Position	80X30	Qualified
	Quantity & Diameter	4-M5	Qualified
Dimension of Air Inlet		NPT 3/4"	Qualified

Operation Check

Is it moving flexible or not with 4 Bar air supply for SR without spring or DA?	Qualified
Whether the pressure of air supply is met the requirement while SR air breaking?	/
Whether the pressure of air supply is met the requirement while SR air ending?	/
Is the motion correct or not with open and close 3 times?	Qualified
Is it can be operated smoothly or not by hand for those with mannual operated equipment	/

Appearance,Paint and Packing Check

Is it good or not for the surface, cast surface and length of the bolt that out of the nut?	Qualified
Whether it is uniform and no drop for the spray painting? Thickness:100-120 μm.	Qualified
Is it right for the nameplate print and its assembled position?	Qualified
Whether the product is packed tightly and the shipping mark is right?	Qualified

Explanation: All the above inspections are under room temperature and the shipping mark is right.


The results above indicated are exact transcription from the corresponding certificates from our suppliers which are filed in our factory.

Inspector: *Ale*

Actreg (Shanghai) Actuator Co., Ltd
Quality Department

Test Report of SY Actuator

(BS/EN-10204 / 3.1.)

			
Date	Nov.11th 2018	Type	SY01F16-350 SR4-NC
Series No	C-180850A-B	Quantity	2

EU DECLARATION OF CONFORMITY

DIRECTIVE 2014/68/EU "PED"

ACTERG S.A.U DECLARES THAT:

The referred actuator, classified as pressure accessories, have been designed and manufactured in accordance with the requirements of the Pressure Equipment Directive 2014/68/EU and are in conformity with national implementing legislation.

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Notified BODY THAT carried out the inspection:

ECA Entidad Colaboradora de la Administración S.L.U. (Notified Body nr 0056) –BUREAU VERITAS

Avda. Can Fajó dels Aurons, 9 Parque Empresarial A-7, 08174 Sant Cugat del Valles – Barcelona – Spain.

Reference number of the Certificate of Quality System Approval CE-0056-PED-H1-ATG-001-17-ESP Rev.A

For actuators Category I Notify Body is not required.

ASSESSMENT OF CONFORMITY PROCEDURE FOLLOWED

MODULE A of ANNEX III of DIRECTIVE 2014/68/EU for Category I

MODULE H1 of ANNEX III of DIRECTIVE 2014/68/EU for Category II to IV

CE marking must not be affixed for SEP equipment.

The object of the declaration described above is in conformity with the relevant Union harmonization legislation:

The Equipment has been designed, manufactured, and inspected according to the codes: ASME VIII Div.I Ed.2010 and Finite Element Analysis.

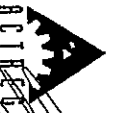
Other DIRECTIVES that apply to this product: ATEX 2014/34/EU

NOTE: When the ACTREG actuators assemble accessories which require submittal to other Directives they will be labelled with CE mark and to the Declaration of Conformity of ACTREG will be joined the declaration of Conformity of manufacturer of accessory.

Sant Boi (Barcelona) Spain

Alex Velasco

Quality Manager


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