

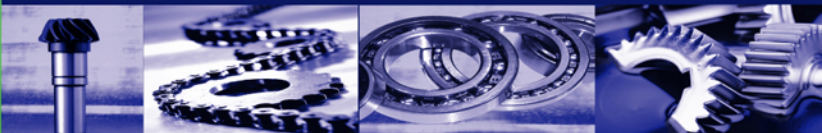
New Product Development Solution

*Chinese Product
Quality Solution Provider*



To Fit Your Needs:

- *Shorten Product Development Time*
- *Market Price Research*
- *Increase Successful Rate*
- *Qualifying Supplier Thru Audit & Sample Testing*



- *Preparation Of All Appendix Documentations For Use In Further Inquiry And Ordering*

To Make You Trouble Free

*Quality
Security*



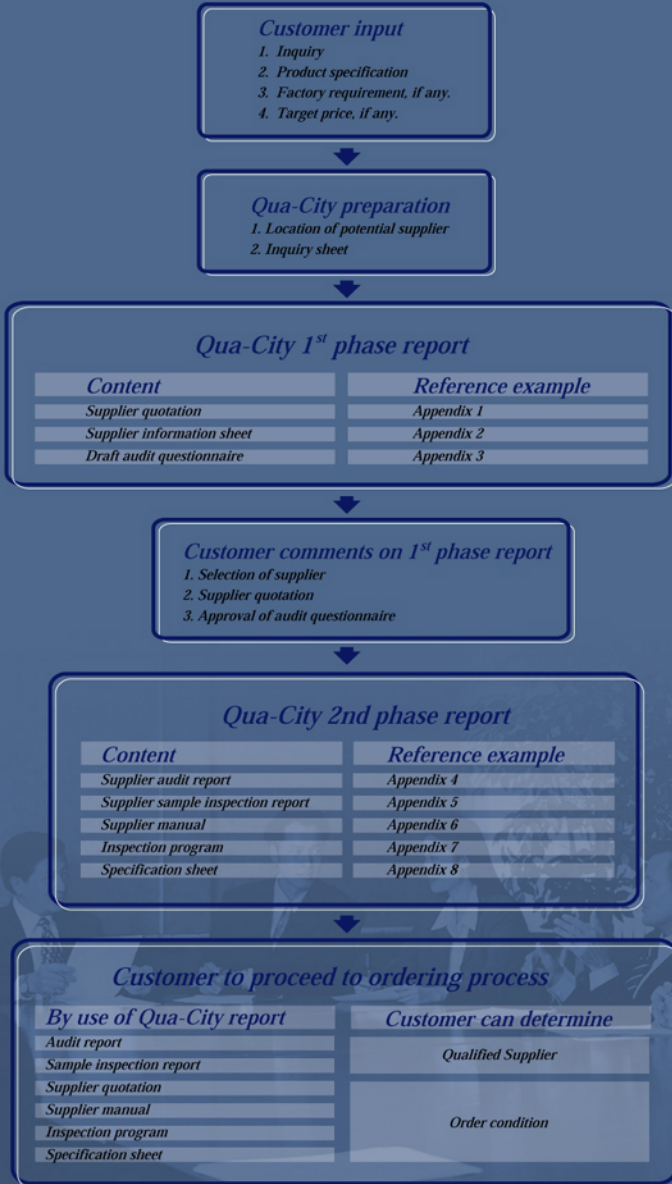
**QUA
CITY**[®]



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Operation Flowchart





Appendix 3 Audit questionnaire (example)

Deep groove ball bearing

No	Process Name	Item	1	2	3	4	5	Comment/Action Required	Person Responsible	Due Date
1	Quality system	What kind of quality accreditation does supplier hold?(ISO9001, QS9000.....)								
2	Process control plan	Does supplier has main processes control plan?								
3	Operation instruction	3.1 Is operation instruction (or process documents) available for each process?								
		3.2 Are operation instructions effective?								
		3.3 Implementation								
4	Facility	4.1 Is facility enough for production and inspection requirements?								
		4.2 Are capability analysis of key processes done?								
5	Inspection program	5.1 Is there inspection program corresponding to control plan for each inspection point? (including inspection items, tolerance, gauge, sample size and frequency etc.)								
		5.2 Is the edition valid and easy to get?								
		5.3 Are inspection records available?								
		5.4 If well implemented?								
6	Inspection instrument	6.1 Are instruments and gauges enough for inspection requirements?								
		6.2 Are all instruments and gauges measurement traceable?								
		6.3 Are Instruments and gauges in use in valid period?								
7	Outsourcing control	7.1 Is management program of outsourced parts available and effective?								
		7.2 Are there acceptance criteria and corresponding records of outsourced parts?								
		7.3 Are there disposal rules, obvious storage marks and disposal records for non conforming product?								
		7.4 Are outsourced parts with certificates periodically checked or checked by third party?								



Deep groove ball bearing

No	Process Name	Item	1	2	3	4	5	Comment/Action Required	Person Responsible	Due Date
8	Key and special process control	8.1 Are key and special process clearly defined?								
		8.2 Are there control points and effective control methods in key and special processes?								
		8.3 Key and special processes and quality control parameters of deep groove ball bearing:								
		a. Inner diameter, outer diameter and raceway grinding process: dimension, form and position tolerance, burn, roundness and roughness.								
		b. Inner and outer raceway superfinishing process: roughness and appearance.								
		c. Heat treatment process: microstructure and hardness.								
		d. Assembly process: assembly radial clearance, cleanliness and anti-rust packing.								
		Vibration velocity and acceleration Shield(seal) pressing quality								
9	Non conforming product disposal	Are there feedback and disposal program for non conforming parts and working procedures. Does relative records exist?								
10	Prototype testing	Are prototype testings periodically carried out?								
11*	Product quality statistic	Ask supplier for: First-pass rate, customer reject rate, internal scrap rate and cost of poor quality.								





Appendix 4 Audit summary report (example)

<i>SUPPLIER DATA SHEET</i>		<i>Date of Survey :</i>	
A. Supplier Name and Address			
Name:			
Address:			
Phone:		Fax:	
Website Address:			
B. Individuals Contacted During Survey			
Name:		Title:	
Name:		Title:	
Name:		Title:	
C. Total No. of Employees:			
Total in Engineering:		Total in Quality:	
Total plant area:		Total in Manufacturing:	
		Area of Buildings:	
D. Quality Assurance Department Reports to :			
E. Type of Product/Services Supplied:			
F. List the quality standards/specifications that are included in supplier's quality systems, including any military standards or industry codes that apply.			
G. If supplier is quality system accreditation registered, list the name of registrar, certification number, date of first and last audit:			
H. Survey done by:			





SUPPLIER SURVEY RATING REPORT

A. Score

Section	Element	Max Pts Available	Score	Percentage
1.0	Quality System	5	4	80%
2.0	Process Control Plan	5	4	80%
3.0	Operation Instruction	15	15	100%
4.0	Facility	10	4	40%
5.0	Inspection Program	20	19	95%
6.0	Inspection Instrument	15	14	93%
7.0	Outsourcing Control	20	8	40%
8.0	Key and Special Process	10	5	50%
9.0	Non Conforming Product Disposal	5	2	40%
10.0	Prototype Testing	5	5	100%
	Total	110	80	73%

B. Classification of Supplier Based on Survey Score

Excellent	> 100			
Good	> 80			
Passable	> 66			80
Unqualified	< 66			

C. Product Process Survey Results

Category	Number of Action items
Critical Quality Procedure	4(General)
Special Process	1
Other comments:	4 observation items

D. Observations & Recommendations (Please use a new page if there is insufficient space)

Appendix 5 Sample report (example)



Date: _____
 Ref. No.: _____ Lot No.: _____ Client: _____
 Item: _____ Manufacturer: _____ Supplier: _____
 Marking: _____ Shipment Qty.: _____ Tested Pcs.: _____

No	Inspection Item	Normal (mm)	Tolerance (μm)		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
			min	max																					
1	Δ dmp		0																						
2	Vdp	0																							
3	Vdmp	0																							
4	Δ Dmp		0																						
5	VDp	0																							
6	VDmp	0																							
7	Δ Bs		0																						
8	Δ Cs		0																						
9	Δ Ts	0																							
10	Sd																								
11	SD																								
12	Kia																								
13	Kea																								
14	Sia																								
15	Sea																								
16	VBs	0																							
17	VCs	0																							
18	Gr																								
19	Hardness(HRC)																								
20		dB	0																						
21		VL	0																						
22		VM	0																						
23		VH	0																						
24	Remainder Magnetism(mt)	0																							
25	Remark																								
26	Grease-filling																								





Appendix 6 Supplier manual (example)



FROM: ABC Co.
TO : All suppliers

Ref: SM ABC d/m/y

On all bearing orders placed by ABC

ABC appoints Qua-City Inspection Engineering (Shanghai) Co., Ltd.
Address: No. 128 Lane 311, Yin Jia Bang Road, An Dong Village
Zhang Jiang Town, Pudong, Shanghai, P.C. 201203
Tel: 021-50200115
Fax: 021-50200116
E-mail: info@quacity.com
Contact Person: Mr. ***

to be the quality assurance agent for the purchases of bearings from China. Please study this document and all its attachments carefully and sign and seal below in the space indicated to acknowledge your understanding and acceptance of the terms and conditions. Once duly signed and sealed, this document becomes a legal supplement for all of our orders placed with you from this time forward. After you have signed and sealed this document, please return a copy by fax to: Qua-City Inspection Engineering (Shanghai) Co. Ltd. Should you have any questions, please feel free to contact Mr. *** of Qua-City.

1. BEARING STANDARD AND REQUIREMENTS

Unless otherwise specified, the bearing standard should be in accordance with the following:

1.1 TECHNICAL STANDARD

Please refer to the 'SPECIFICATION SHEET'.

1.2 APPEARANCE

Finishing to be complete with no surface marks (scratches or blemishes).
No rust allowed anywhere on any Ball bearing surface.

1.3 ANTI-RUST REQUIREMENT

Anti-rust oil must only form a thin and dry coating on the bearing. Never use grease.

2. MARKING and PACKING

2.1 MARKING

Please refer to relative 'SPECIFICATION SHEET ' for the markings of brand and part number on bearings.

2.2 PACKING

The supplier will use INDUSTRIAL packing with the part number and the quantity listed on the outside of each product container.

3. DELIVERY SCHEDULE

3.1 The supplier must arrange for and strictly adhere to the delivery order schedules.

3.2 If there are any delivery schedule changes (including delay by quality failure) the supplier must provide a new delivery schedule to ABC for prior approval. ABC reserves the right to cancel orders where scheduled delivery is delayed.

4. PRICE TERMS

All quotations and orders will be in:

4.1 CIF/FOB: Port XXX

4.2 Payment by XXX



5. INSPECTION AUTHORISATION

5.1 FACTORY EVALUATION

The supplier must cooperate with Qua-City to make a factory assessment if requested.

5.2 IN-PRODUCTION INSPECTION

The supplier must cooperate with Qua-City to inspect the goods during production of our orders if requested.

5.3 PRE-SHIPMENT INSPECTION

All of the goods must be sent to our appointed inspection center in Shanghai "Qua-City Inspection Engineering (Shanghai) Co. Ltd."

Each supplier should fax the shipment advisory to "Qua-City Inspection Engineering (Shanghai) Co. Ltd." at fax: 86 021 5020 0116 a minimum of three (3) days before delivering to Qua-City.

All the relative consignment transportation expenses to and from Qua-City warehouse will be borne by the supplier.

5.4 SAMPLING AND INSPECTION STANDARD

Please refer to relative 'INSPECTION PROGRAM' & 'SAMPLING STANDARD'.

5.5 INSPECTION CHARGE

All suppliers must include Qua-City bearing pre-shipment random inspection fee in all the quotations and orders to ABC. The supplier will pay for all inspection charges directly to Qua-City, including the first and each subsequent re-inspection concerning the rejected goods shipments. All relative inspection charges are to be paid to Qua-City within one (1) week after each inspection is complete. Please ask Qua-City for the inspection fee.

6. SHIPMENT AUTHORIZATION

All shipments can only be effected only after inspection passed or confirmed by customer.

7. SUPPLIER'S AFTER SALES RESPONSIBILITIES

The "Shipment Authorization Letter" does not release you from any responsibilities resulting from quality and/or other problems arising from the supplied goods. Should there happen to be any claims from our customers due to the faults of the goods supplied, then the supplier shall bear full responsibility for any such claims.

ALL OF THE STATEMENTS MADE IN THIS DOCUMENT ARE TO BE INTERPRETED IN THE ENGLISH VERSION, WHEREAS THE CHINESE TRANSLATION SERVES FOR REFERENCE PURPOSES ONLY.

CONFIRMED AND ACCEPTED BY

NAME OF SUPPLIER (PLEASE TYPE) _____

AUTHORISED SIGNATURE WITH COMPANY CHOP _____

DATE _____

Appendix 7 Inspection program



**QUA
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DEEP GROOVE BALL BEARING

Ref: IP ABC DGBB- d/m/ly

1. **STANDARD EMPLOYED**
ISO 2859 and relative standards
2. **INSPECTION CLASSIFICATION**

KEY ITEMS	MAIN ITEMS	SUB-ITEMS
HARDNESS	dmp, Vdp, Vdmp	Bs, VBs
CRACK	Dmp, VDp, VDmp	Cs, VCs
MARKING	Gr	MAGNET RESIDUE
NOISE AND VIBRATION OF EMQ BEARINGS	Kia, Sia	CHAMFER
	Kea, Sea	APPEARANCE
	Sd, SD	ANTI-RUST PACKING
	ROTATION	SURFACE ROUGHNESS
	SEALING	MARKING QUALITY
	NOISE AND VIBRATION	

3. **ACCEPTABLE LEVER**

Key items : AQL 0.1

Main items : AQL 1

Sub items : AQL 4

4. **SAMPLING SIZE**

ISO 2859 Grade 1 (please refer to page 53 of Qua-City catalogue "Assessment & Inspection Program").

5. **SAMPLING TYPE**

One time sampling type of normal inspection

6. **SAMPLING BATCH TREATMENT**

- 6.1 Inspection passed

Whole item consignment batch passed

- 6.2 Inspection failed

Whole item consignment batch returns to suppliers for 100% Screening before for another inspection.

Example: for a batch size of 10,000 pcs, sample size=80pcs.

Main items: AC(pass number)=2pcs. Re (failed number)=3pcs.

Sub-items: AC(pass number)=7pcs. Re (failed number)=8pcs.



Appendix 8 Specification sheet



DEEP GROOVE BALL BEARING

Ref: SS ABC DGBB- d/m/y

Relative documents	Supplier Manual	SM ABC d/m/y
	Inspection Program	IP ABC DGBB- d/m/y
Material	Outer Ring	100 Cr 6
	Inner Ring	
	Rolling Elements	
Hardness	Outer Ring	HRc 58-62
	Inner Ring	
	Rolling Elements	HRc 60-66
Tolerance		P0
Noise		Z1
Vibration		V1
Grease fill		25-35%
Marking		ABC

Residual Magnetism

Bearing Outer diameter (mm)	>		30	50	120	250
	<	30	50	120	250	430
Max. Magnet Residue(mT)		0.4	0.5	0.6	0.8	1.0





ACCREDITATION CERTIFICATE
OF CHINA NATIONAL ACCREDITATION BOARD
FOR LABORATORIES
(No.L1874)

This is to certify that

**Qua-City Inspection Engineering(Shanghai) Co., Ltd.
Laboratory**

No.128, Lane 311, Yinjiabang Road, Andong Village, Zhangjiang Town,
Pudong, Shanghai, China

has been assessed and proved to be in compliance with CNAL/AC01:
2003 Accreditation Criteria for Testing and Calibration Laboratories
(identical to ISO/IEC17025: 1999 General Requirements for the
Competence of Testing and Calibration Laboratories).
Accreditation scope of the laboratory is listed in the attachment.

Date of Issue: 2004.12.31

Date of Expiry: 2009.12.30

Wei Hao

Secretary General of CNAL



**QUA
CITY**®

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Website:www.quacity.com

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Cixi Qua-City Inspection Engineering Co., Ltd.
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Cixi City,Zhejiang Province,China.
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Fax:0574-63330773



Laboratories
Accreditation Certificate
ISO/IEC17025:1999 (No. L1874)