

Why we need Inspection Service

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Self-introduction



Jane Wong received Engineering Doctorate in Quality Management, and MSC in Technology Management from The Hong Kong Polytechnic University.

Jane has over 30 years experience in inspection business at Intertek Testing Services (ITS), and DEKRA Certification Hong Kong Ltd. (ex-KEMA Quality Hong Kong Ltd.) commenced as the QA Engineer conducting on-site inspection for E&E products to Assistant General Manager responsible for South China inspection business and Greater China business development in ITS, then her excellent knowledge and network in retailer services excelled her in another challenge as Sales Manager in DEKRA South China.

A strong advocate for hands-on, quality and customer-oriented mentality, she involves her sub-ordinates in a variety of problem-solving and technology-infused activities that provide them with opportunities to use their testing, certification and inspection expertise to help customers to timely and legally response to the market.

Now, she works at General Inspection Services (GIS) as Retail Sales Director.

Vice Chairman of HKSQ and Co-opted Members of HKQF

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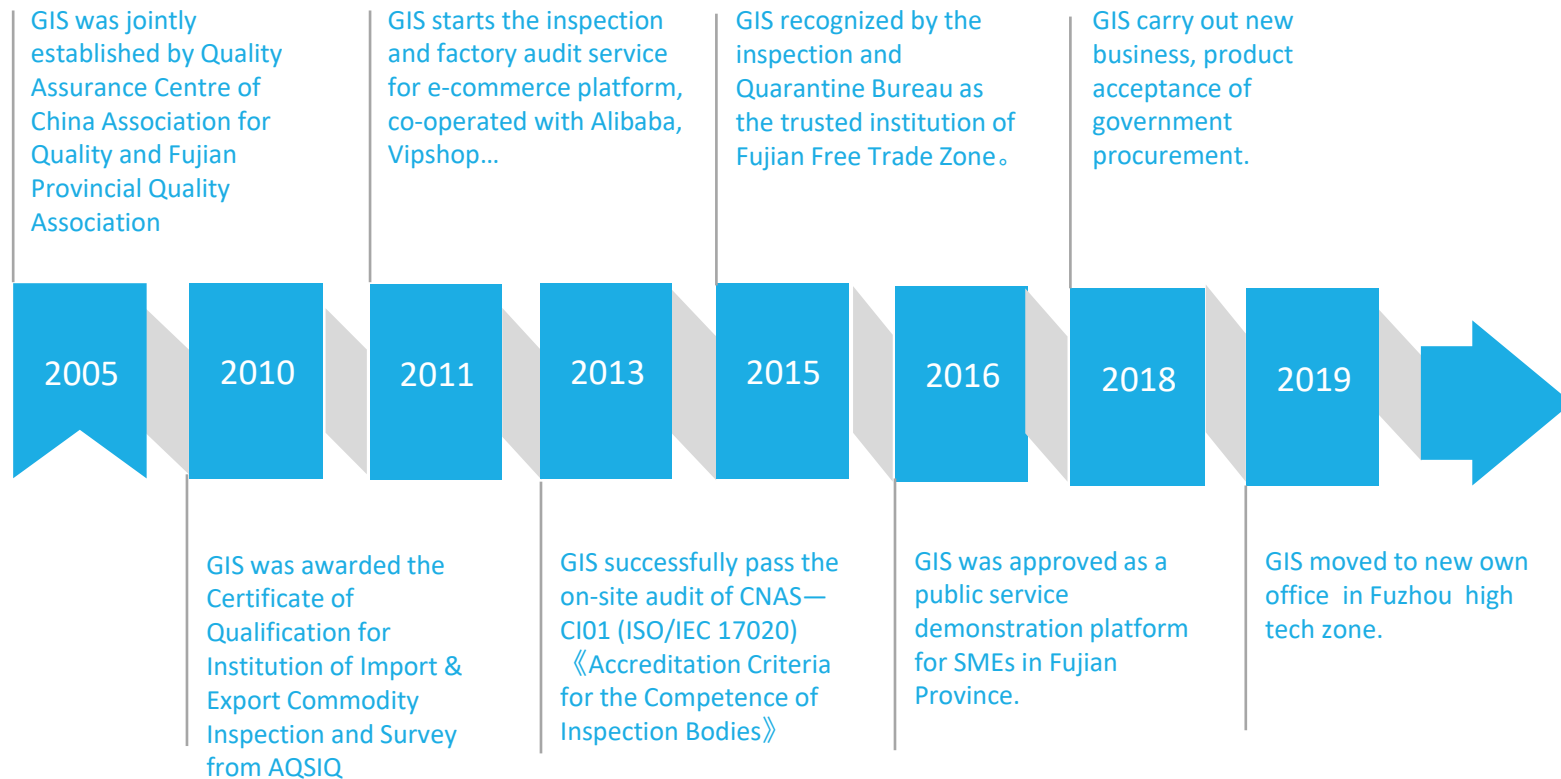
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GIS Introduction



- ◆ GIS (General Inspection Service Co., Ltd) is a professional quality engineering and management consultation and service company, has been providing the services of third party inspection, plant evaluation as well as project quality management, product testing and inspection and quality engineering consultation since 2005.
- ◆ GIS is devoted to assist the clients to establish and improve quality assurance and quality control and effectively help the clients to develop and supervise their suppliers.
- ◆ GIS is qualified by General Administration of Quality Supervision and Quarantine of P.R China.

GIS Introduction - History



GIS Introduction -Certification



License

营业执照



Certificate

检验鉴定机构资质



CNAS

CNAS认可决定书



Membership

常务理事会员证书



High Tech

国家高新技术企业

GIS Introduction - Geography Coverage

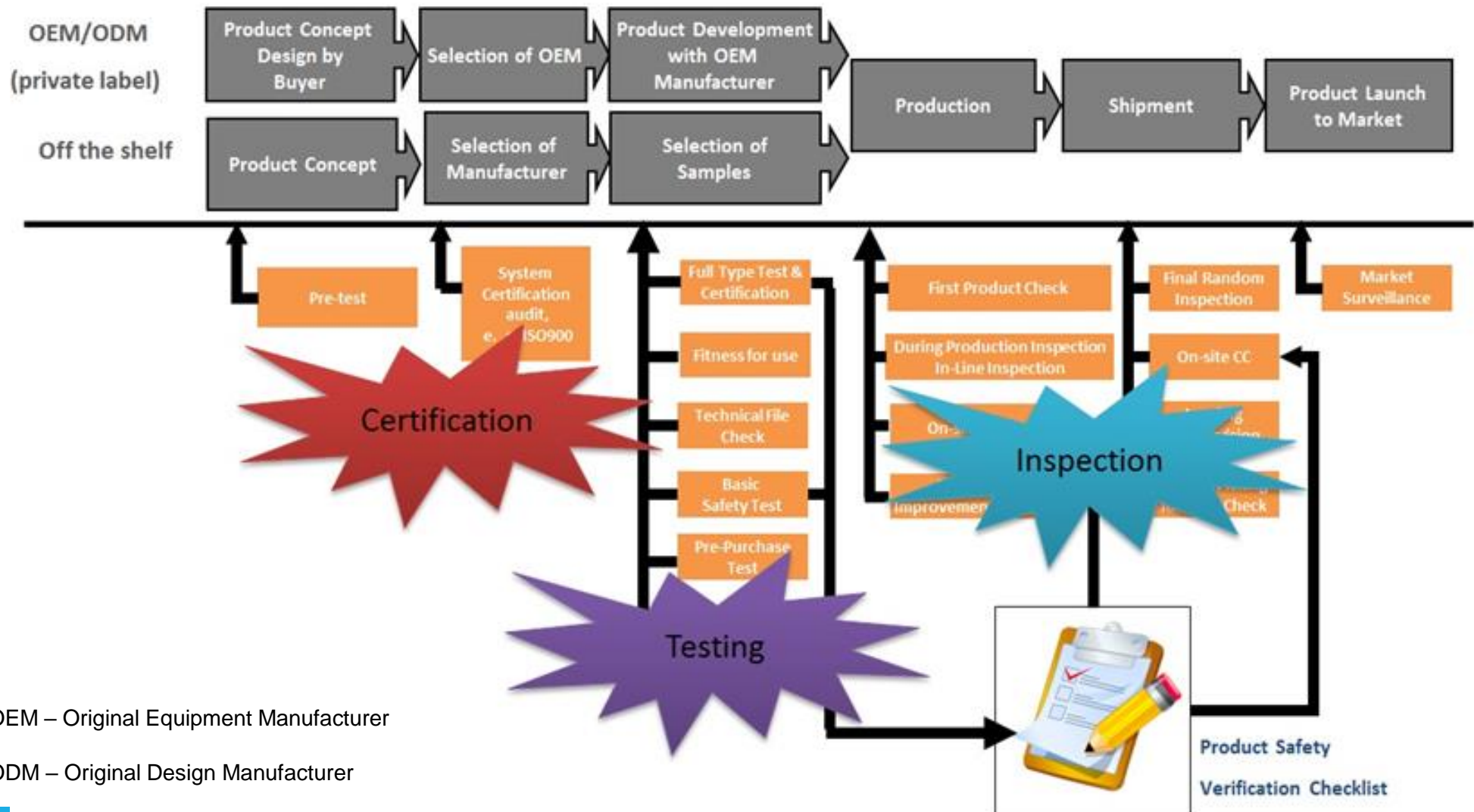


Why we need inspection services ?

Quality control is a key success factor for companies dealing with suppliers. On-site quality inspections and factory audit services help businesses to:

- Reduce risks associated with poor quality, loading, storage, transportation and non-compliance with regulatory requirements
- Get informed in advance about production problems and shipping delays
- Ensure that contractual obligations are met specifications, packaging, marking and delivery,
- Identify problems before products are shipped or distributed
- Establish and maintain a high-performance vendor base throughout the world and lower costs.

Quality Assurance & Quality Control in the Global Supply Chain



Inspection Services Introduction

Pre-Production Inspection (First Article Check)



Pre-production inspection is to be conducted at the beginning of production or even before the start of manufacturing.

Our duties



- Check the raw materials and components used in production;
- Sample and test semi-finished products to detect potential defects;
- Evaluate the quality system of the production line;
- Assess the management and ability of production equipments;
- Assess the production capacity of the manufacturer;
- Provide technical advice to the factory to improve product quality and minimize defects;
- Assess production schedule.



Inspection Services Introduction

During Production Inspection (DPI) / In-line Inspection



During-production inspection is to be conducted when 10%-15% of the production is completed.

Our duties



- Sample and evaluate the products for safety, performance, design, function and appearance;
- Check for any defects and deviation from clients' specifications and/or given samples;
- Evaluate the packing methods and packing material;
- Check and evaluate the quality management of production line;
- Evaluate the production progress against the schedule and predict if the shipment is on schedule;
- Give practical and effective advices to improve quality in accordance of the findings.



Inspection Services Introduction

Pre-Shipment Inspection (PSI) / Final Random Inspection (FRI)



Pre-shipment inspection takes place when the merchandise is finished, packed and ready for shipment. Sampling is implemented in accordance with the internationally recognized acceptance sampling standards. e.g. ISO2859/ANSI/ASQCZ1.4 /BS6001/DIN40080/NFX06-022, etc.



Our duties:

- Check quantity, accessories, assortment, labeling, shipping mark, etc. against the purchase order, given samples and technical documents;
- Sample and evaluate product for safety, design, function, appearance, and performance;
- Check for any defects and deviation against the technical standards or requirements;
- Assess packaging form.



Inspection Services Introduction

Loading Supervision



Loading supervision is a loading process control when the products are being loaded into the container.

Our duties:

- Check the container condition;
- Verify the products loaded;
- Closely monitor the loading process;
- Verify the quantity;
- Ensure proper handling of the goods and proper stack in the container.

As soon as the inspection is finished, the container will be sealed with the shipping line seal. And seal number is recorded in the loading report.



Product Categories



Electronics	Soft goods	Hardgoods	Mechanical products
Household electrical appliances such as coffee machine :	Garment such as apparel :	Handicraft such as glass ornament :	Electromechanical device such as generator :
			
Audio & video products such as DVD player :	Footwear such as shoes :	Household products such as garbage tin :	Machine parts such as hydraulic parts :
			
Electronic equipment such as door bell :	Home textile such as curtain :	Furniture such as Office chair :	Auto parts such as damping spring :
			
Computer device such as USB hub :	Fabric such as knitted fabric :	Toys such as scooter :	Pump such as diesel pump :
			
Lighting products such as LED bulb	Bags / suitcases such as backpack :	Building / house furnishing products such as flooring :	Mould such as casting mould :
			
Components such as charger		Sports equipment such as stepper :	Machine Parts such as spring washer :
			

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www.gis-inspection.com

Quality sourcing with GIS - supplier/product delivery

Inspection Standard:
ANSI/ASQ Z14-M1-M1.1-10E / ISO 6801 / DIN 4080 / ISO 2859 / NTA 6842

General Inspection Levels		Special Inspection Levels	
Lot Size	Level	Lot Size	Level
11	1	11	1
11	2	11	2
11	3	11	3
11	4	11	4
11	5	11	5
11	6	11	6
11	7	11	7
11	8	11	8
11	9	11	9
11	10	11	10
11	11	11	11
11	12	11	12
11	13	11	13
11	14	11	14
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11	90	11	90
11	91	11	91
11	92	11	92
11	93	11	93
11	94	11	94
11	95	11	95
11	96	11	96
11	97	11	97
11	98	11	98
11	99	11	99
11	100	11	100

AQL / Drop Test Table

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On-site Carton Drop Test

Drop or impact the packaged product according to the following sequence:

- Test the most fragile face-3 corner, if not known, test the 2-3-5 corner
- The shortest edge radiating from the corner tested
- The next longest edge from the corner tested
- The longest edge radiating from the corner tested
- Flat on one of the smallest faces
- Flat on the opposite small face
- Flat on one of the medium faces
- Flat on the opposite medium face
- Flat on one of the largest faces
- Flat on the opposite large face

Packaged-product weight				Drop height	
Equal to or greater than		But less than		Free fall	
lb	kg	lb	kg	in.	cm
0	0	21	9.5	30	76.2
21	9.5	41	18.6	24	61.0
41	18.6	61	27.7	18	45.7
61	27.7	100	45.3	12	30.5
100	45.3	150	68	8	20.3

Case Study - Example of Inspection plan

	Item	No. of quantity (pieces)	No. of Samples inspected	No. of Carton	No. of Carton drawn
1 st inspection	A	1200	80	60	8

	<i>Single item</i>
<i>1st inspection</i>	At least $\sqrt{\text{Total Packed Cartons}}$

Note : Round down when <0.5 and round up when ≥0.5

Case Study - Quantity check

100/80 rule:

100% production finished, and at least 80% packed into cartons, with balance under packing stage should be ready for inspection.

Special attention

- a. Empty export carton**
- b. Disorderly stacking**
- c. Separate stacking**
- d. Supposititious goods (Fake, repeat)**



Case Study - Single Sampling Plans For Normal Inspection

- Determine the **lot size** (usually based on the selling unit to end user)
- Determine the **inspection level** (usually provided by client)
- Enter table I and find **sample-size code letter**

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Quality sourcing with GIS - supplier, product, delivery

Inspection Standard:
ANSI / ASQC Z1.4 / MIL-STD-105E / BS 6001 / DIN 40080 / ISO 2859 / NFX 06-022

Lot or batch size	Special Inspection Levels				General Inspection Levels		
	S-1	S-2	S-3	S-4	I	II	III
2 ~ 8	A	A	A	A	A	A	B
9 ~ 15	A	A	A	A	A	B	C
16 ~ 25	A	A	B	B	A	B	D
26 ~ 50	A	B	B	C	C	D	E
51 ~ 90	B	B	C	C	C	E	F
91 ~ 150	B	B	C	D	D	F	G
151 ~ 280	B	C	D	E	E	G	H
281 ~ 500	B	C	D	E	F	H	J
501 ~ 1200	C	C	E	F	G	J	K
1201 ~ 3200	C	D	E	G	H	K	L
3201 ~ 10000	C	D	F	G	J	L	M
10001 ~ 35000	C	D	F	H	K	M	N
35001 ~ 150000	D	E	G	J	L	N	P
150001 ~ 500000	D	E	G	J	M	P	Q
500001 and over	D	E	H	K	N	Q	R

Case Study - Single Sampling Plans For Normal Inspection

- Determine the type of sampling plan (usually single sampling plan for normal inspection)
- Check the sample size by the code letter
- Determine the AQL (usually provided by client)

TABLE II SINGLE SAMPLING PLANS FOR NORMAL INSPECTION																																								
Sample size code letter	Sample size	Acceptable Quality Limits (Normal Inspection)																																						
		0.010		0.015		0.025		0.040		0.065		0.10		0.15		0.25		0.40		0.65		1.0		1.5		2.5		4.0		6.5		10		15		25		40		
		Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re	Ac	Re			
A	2																																							
B	3																																							
C	5																																							
D	8																																							
E	13																																							
F	20																																							
G	32																																							
H	50																																							
J	80																																							
K	125																																							
L	200																																							
M	315																																							
N	500																																							
P	800																																							
Q	1250																																							
R	2000																																							

↓ = Use first sampling plan below arrow. If sample size equals, or exceeds lot or batch size, do 100 percent inspection.

↑ = Use first sampling plan above arrow.

Ac = Acceptable number

Re = Rejection number

Case Study - Single Sampling Plans For Normal Inspection

It was not the final sample size that code letter was corresponding the simple size sometimes.

- The final sample size was changed by difference AQL
- (AQL=0.4 and sample size=80 indicate to down arrow)
- The code letter correspond with the sample size
- (accepted defect=1 → 125 new sample size)
- The final sample size 125 pieces

Sample size code letter	Sample size	Acceptable Quality Limits (Normal Inspection)																			
		0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	
		Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re
A	2																				
B	3																				
C	5																				
D	8																				
E	13																				
F	20																				
G	32																				
H	50																				
J	80																				
K	125																				
L	200																				
M	315																				
N	500																				
P	800																				
Q	1250																				
R	2000																				

↓ = Use first sampling plan below arrow. If sample size equals, or exceeds lot or batch size, do 100 percent inspection.

↑ = Use first sampling plan above arrow.

Ac = Acceptable number

Re = Rejection number

Note : General Defect Classification include Critical, Major & Minor, so AQL face to these three defects

Case Study - Single Sampling Plans For Normal Inspection

Critical : Not allowed ; Major : 0.4 ; Minor : 4.0 ;

- Check the sample size 13 by the code letter "E"
- Sample size 13 for Min defective
- Sample size 32 for Maj defective
- Sample size 32 for Cri defective

Note : The critical defective: "Not allowed" implies to zero unit of defect and the sampling size should refer to the highest sample size of "Major" or "Minor" category.

Sample size code letter	Sample size	Acceptable Quality Limits (Normal Inspection)																			
		0.010	0.015	0.025	0.040	0.065	0.10	0.15	0.25	0.40	0.65	1.0	1.5	2.5	4.0	6.5	10	15	25	40	
		Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re	Ac Re
A	2																				
B	3																				
C	5																				
D	8																				
E	13																				
F	20																				
G	32																				
H	50																				
J	80																				
K	125																				
L	200																				
M	315																				
N	500																				
P	800																				
Q	1250																				
R	2000																				

↓ = Use first sampling plan below arrow. If sample size equals, or exceeds lot or batch size, do 100 percent inspection.

↑ = Use first sampling plan above arrow.

Ac = Acceptable number

Re = Rejection number

Case Study - Sampling Plan & AQL

Ac/Re (14/15) means the maximum number for Major defects allowed is 14pcs in total 315pcs inspected; 15pcs and the above Major defects may result in whole lot will be rejected.

Ac/Re (21/22) means the maximum number for Minor defects allowed is 21pcs in total 315pcs inspected; 22pcs and the above Minor defects may result in whole lot will be rejected.

Roadmap of Inspection

- ISO 17020, is called “General Criteria for the Operation of Various Types of Bodies Performing Inspection”.
- ISO 17020 is aimed at ensuring that *inspection companies* are genuinely independent. Furthermore, that they have processes to ensure their staff are unbiased. Therefore, it is a standard that verifies those who measure things. (Source from [ISO/IEC 17020 - Wikipedia, la enciclopedia libre](#))
- Hong Kong Inspection Body Accreditation Scheme (HKIAS) is operated by the Hong Kong Accreditation Service (HKAS). HKAS also operates the Hong Kong Laboratory Accreditation Scheme (HOKLAS) and the Hong Kong Certification Body Accreditation Scheme (HKCAS). HKIAS started to accept applications from 15 December 1999. Initially, it only provided accreditation for consumer product inspection. From 1 April 2002, accreditation service is extended to inspection of construction products and inspection of welds. (Source from [ITC - Hong Kong Inspection Body Accreditation Scheme \(HKIAS\)](#))
- HKIAS ISO/IEC17020 for Inspection Bodies by IVE ([持續專業進修](#))
- Hong Kong Qualifications Framework (HKQF) for Testing, Inspection and Certification (TIC) (Source from [Testing, Inspection & Certification - Home \(hkqf.gov.hk\)](#)) and also Co-opted Members of HKQF ([Testing, Inspection & Certification - Promotion & Consultation Subcommittee \(hkqf.gov.hk\)](#))

AOB & Thank you

Please visit our website for detail information:

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