

行政院及所屬各機關出國報告審核表

出國報告名稱：龍門計畫國外製造機械設備製程中品質查驗

出國計畫主辦機關名稱：台灣電力股份有限公司

出國人姓名/職稱/服務單位：邱雲長/稽查/核能安全處

出國計畫 主辦機關 審核意見	☒ 1. 依限繳交出國報告 ☒ 2. 格式完整 ☒ 3. 內容充實完備. ☒ 4. 建議具參考價值 ☐ 5. 送本機關參考或研辦 ☐ 6. 送上級機關參考 ☐ 7. 退回補正，原因： ☐ (1) 不符原核定出國計畫 ☐ (2) 以外文撰寫或僅以所蒐集外文資料為內容 ☐ (3) 內容空洞簡略 ☐ (4) 未依行政院所屬各機關出國報告規格辦理 ☐ (5) 未於資訊網登錄提要資料及傳送出國報告電子檔 ☐ 8. 其他處理意見
層轉機關 審核意見	☐ 同意主辦機關審核意見 ☐ 全部 ☐ 部分 _____ (填寫審核意見編號) ☐ 退回補正，原因： _____ (填寫審核意見編號) ☐ 其他處理意見：

說明：

- 一、 出國計畫主辦機關即層轉機關時，不需填寫「層轉機關審核意見」。
- 二、 各機關可依需要自行增列審核項目內容，出國報告審核完畢本表請自行保存。
- 三、 審核作業應於報告提出後二個月內完成。

報告人：

單位
主管：

主管處
主管：

總經理
副總經理：

徐懷棟 9/14



行政院及所屬各機關出國報告提要

出國報告名稱：龍門計畫國外製造機械設備製程中品質查驗

頁數 36 含附件：■是□否

出國計畫主辦機關/聯絡人/電話：台灣電力公司/陳德隆（人力資源處）
/02-23667396

出國人員姓名/服務機關/單位/職稱/電話：邱雲長/台灣電力公司/核能安全處/
稽查/02-23667318

出國類別：□1 考察□2 進修□3 研究□4 實習■5 其他（洽公）

出國期間：96/08/05~96/08/16 出國地區：美國

報告日期：96/08/31

分類號/目：

關鍵詞：

內容摘要：本項出國計畫為依據龍門計畫 ASME Sec. III 核能級管路支撐(Pipe Supports)採購合約(8749511M033B0)之規定，對核四工程核能級管路支撐製造廠商 Lisega 公司執行製程中品質查驗，包括停留檢驗點及見證檢驗點之執行、製造程序之查證、設備之標示、包裝與儲存之查證、不符合事項之處理、裝運前之最終檢驗及相關品質紀錄審查等。查驗結果，品質紀錄審查發現有 16 項文件疏失，廠商均已立即配合完成改正；管路支撐實體檢驗結果則未發現有不符情況。已依據查驗結果，簽署 Product Quality Certificate (PQC)，同意廠商交運本批 321 組管路支撐。

出國報告（出國類別：其他）

龍門計畫國外製造機械設備製程中品質查驗

服務機關：台灣電力公司核能安全處

姓名職稱：邱雲長/稽查

派赴國家：美國

出國期間：96 年 8 月 5 日至 96 年 8 月 16 日

報告日期：96 年 8 月 31 日

龍門計畫國外製造機械設備製程中品質查驗

摘 要

本項出國計畫為依據龍門計畫 ASME Sec. III 核能級管路支撐(Pipe Supports) 採購合約(8749511M033B0)之規定，對核四工程核能級管路支撐製造廠商 Lisega 公司執行製程中品質查驗，包括停留檢驗點及見證檢驗點之執行、製造程序之查證、設備之標示、包裝與儲存之查證、不符合事項之處理、裝運前之最終檢驗及相關品質紀錄審查等。查驗結果，品質紀錄審查發現有 16 項文件疏失，廠商均已立即配合完成改正；管路支撐實體檢驗結果則未發現有不符合情況。已依據查驗結果，簽署 Product Quality Certificate (PQC)，同意廠商交運本批 321 組管路支撐。

龍門計畫國外製造機械設備製程中品質查驗

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壹、出國任務說明

本項出國計畫為依據龍門計畫 ASME Sec. III 核能級管路支撐(Pipe Supports)採購合約(8749511M033B0)之規定，對核四工程核能級管路支撐製造廠商 Lisega 公司執行製程中品質查驗，包括停留檢驗點及見證檢驗點之執行、製造程序之查證、設備之標示、包裝與儲存之查證、不符合事項之處理、裝運前之最終檢驗及相關品質紀錄之審查等，實地查證廠商是否落實執行採購合約規定；對發現之品質不符情況，要求廠商採取必要的改正行動，以確保所採購之核能級管路支撐符合採購合約之品質要求。

貳、出國行程

96.08.05 ~ 96.08.06	台北－洛杉磯－亞特蘭大－Newport	往 程
96.08.07 ~ 96.08.13	Newport Lisega 公司	執行品質查驗
96.08.14 ~ 96.08.16	Newport－洛杉磯－亞特蘭大－台北	返 程

參、核能級管路支撐製程中品質查驗工作報告

一、查驗項目及數量

本次查驗項目及數量包括：

Unit 1 BOP Pipe Support：35 組
BONI Pipe Support：286 組

二、查驗方式

查驗進行方式，主要包括：

1. 查驗相關文件及其修訂情況。
2. 審查核能級管路支撐之品質紀錄文件之正確、完整性。
3. 查驗核能級管路支撐之製造、標識、儲存、清潔和 Shipping Preparation 狀況。

三、查驗相關文件及其修訂情況

與 Lisega 公司之 QA Manager Mr. Lewis Rogers 確認目前無未結案之不符合事項。查對現行工作依據之相關文件，主要包括：

1. TPC-Lisega Contract 8749511M033B0

2. Procurement Spec. for Pipe Support—ASME III, Div.1, Class 1,2,3(Spec. No.874-MS033B,Rev.0, Amendment No.2)
3. Lisega 公司 QA Manual (QAM-1, Rev.6)
4. Inspection and Test Plan for BOP(33061.MS033B.4-00004, Rev.1)
5. Inspection and Test Plan for CRD/BONI(33061.MS033B.4-00005, Rev.1 & 33061.MS033B.4-00006, Rev.1)
6. Quality Records List(33061.MS033B.8-10049, Rev.0)
7. Procedure for Storage and Dispatch(33061.MS033B.4-00008, Rev.2)
8. Packaging, Marking and Transportation Procedure (33061.MS033B.4-00009, Rev.0)

四、至 96.08.13 美國 Lisega Inc.部份之核能級管路支撐製造進度如下：

1. BOP 部份：

	<u>一號機</u>	<u>二號機</u>	<u>總 計</u>
Total Q' ty(sets)：	968	883	1851
In Engineering	250	538	788
In Fabrication	358	345	703
PQC Issued：	35	0	35
Shipped：	319	0	319
No Material Required:	6	0	6

2. BONI 部份：

	<u>一號機</u>	<u>二號機</u>	<u>總 計</u>
Total Q' ty(sets)：	3833	NA	3833
In Engineering	71	(在韓國製造)	71
In Fabrication	1910		1910
PQC Issued：	286		286
Shipped：	1212		1212
No Material Required:	354		354

3. CRD 部份：

	<u>一號機</u>	<u>二號機</u>	<u>總 計</u>
Total Q' ty(sets)：	111	NA	111
In Engineering	0	(在韓國製造)	0
In Fabrication	0		0
PQC Issued：	0		0
Shipped：	111		111

五、審查核能級管路支撐之品質紀錄文件

審查各核能級管路支撐之 QRP(Quality Records Package)，包括：Certificate of Compliance, N2 Data Report, CMTR, NDE Reports, Dimensional Inspection Report, As-built Drawing, Standard Component Assembly & Packing Trace List, NUC/NCR, …等，總計審查 Shipment No.8-10098~8-10100 共 3 份 Product Quality Certificate(PQC)所包含之 35 組 BOP Pipe Support 及 286 組 BONI Pipe Support 之品質紀錄文件共 7 冊 2515 頁(詳附件 2、附件 3)，審查結果及處理情形(詳括弧內說明)如下：

- Shipment No.8-10098 (Total of 160 Supports)
 1. Support No.1B31-GUD-800119, 1B31-GUD-800127, 1B31-GUD-800419, 1B31-GUD-800602, 1B31-GUD-800604, Quality Records Package(QRP) 之” Standard Component Assembly & Packing Trace List” 上，將 Support No.1B31 誤植為 1B21。【已由 Lisega 人員更正並簽名】
 2. Support No.1B21-GUD-814204, Certificate of Compliance(C of C)內容之 Pipe Strap 項目，漏列 Trace No.及 Cert. No.。【C of C 內容已修訂並抽換】
 3. Support No.1B21-GUD-814627, C of C 內容漏列 Pipe Strap 項目。【C of C 內容已修訂並抽換】
 4. Support No.1B21-GUD-815841, QRP 之 Page 4/7 中，Cert. No.20701328 誤植為 20701327。【已修訂 Page 4/7 並抽換】
 5. QRP 之「CMTRs for Steel Construction and Parts of Standard Products」項目內，發現缺少 2 份 CMTR。【已將短缺之 Cert. No.103470 及 102750 補附入 4.1A 及 4.13A 項】
 6. QRP 中發現附入無關的銲接程序書(WPS No. WS-P8-P1)及檢定紀錄(PQR No. Spray-8-1)。【已將無關的銲接程序書(Page 0883~0885)及檢定紀錄(Page 0896~0898)抽除】
- Shipment No.8-10099 (Total of 126 Supports)
 1. QRP 之 Page 3/7 中，Support No.1G51-GUD-800801 誤植為 2G51-GUD-800801。【已修訂 Page 3/7 並抽換】
 2. QRP 之 Page 4/7 中，漏列 Support No.1P21-GUD-808204 之 Cert. No.。(已修訂 Page 4/7，加列 Cert. No.20730475，並抽換)
 3. QRP 中發現附入無關的 C of C (Cert. No.20619712)。【已將無關的 C of C (Page 0743~0746) 抽除】
 4. QRP 之「CMTRs for Steel Construction and Parts of Standard Products」項目內，發現缺少 1 份 CMTR。【已將短缺之 Cert. No.101983 補附入 4.58A】
 5. QRP 之「CMTRs for Steel Construction and Parts of Standard

Products」項目內，4.62 項之 CMTR 應為 Cert. No.101770，但實際放入之 CMTR 則為 Cert. No.102104。【已更正並抽換】

6. QRP 中發現附入無關的銲接程序書 (WPS No. WS-P8-P1) 及檢定紀錄 (PQR No. Spray-8-1)。【已將無關的銲接程序書 (Page 1024~1026) 及檢定紀錄 (Page 1037~1039) 抽除】

- Shipment No.8-10100 (Total of 35 Supports)

1. Support No.1T22-PRST-5000, C of C 將 Support No.誤植為 1T22-GUD-5000。【C of C 已更正並抽換】
2. Support No.1W12-SPR-5945, QRP 之 Page 4/7、C of C 及 PQC 之 Attachment 中，均將 Support No.誤植為 1W12-PSR-5945。【已更正前述文件並抽換】
3. QRP 之「CMTRs for Steel Construction and Parts of Standard Products」項目內，發現缺少 1 份 CMTR。【已將短缺之 Cert. No.103470 補附入 4.6A】
4. QRP 中發現缺少不銹鋼材質的銲接程序書及檢定紀錄。【已補附銲接程序書 WPS No. FWP8-8 及檢定紀錄 PQR No. F-P8-8】

六、查驗核能級管路支撐之製造、標識、儲存、清潔和 Shipping Preparation 狀況

1. 以隨機方式抽查 10%，查驗下列 32 組管路支撐之製造尺寸、標識、儲存、及清潔情況：

1B21-GUD-810705	1B21-GUD-810722	1E11-GUD-811402
1B21-GUD-814204	1B21-GUD-814627	1B21-GUD-815840
1B21-GUD-817004	1P21-GUD-817618	1P21-PRST-817711
1P21-GUD-817806	1G31-GUD-2146	1P26-GUD-800104
1K11-GUD-800106	1P11-GUD-800331	1P21-GUD-800405
1P21-GUD-808204	1P21-GUD-808207	1P21-GUD-809811
1B21-GUD-812101	1B21-GUD-812104	1B21-GUD-812107
1P21-GUD-815002	1T22-PRST-5000	1T22-PRST-5002
1P26-SNB-5817	1W12-SPR-5939	1W12-SPR-5947
1G31-GUD-809701	1P13-GUD-802803	1B31-GUD-801206
1T62-GUD-800902	1N22-GUD-800908	

2. 查驗結果上述 32 組管路支撐之製造尺寸均與 As-built Drawing 相符；並均按規定標識，包括：Tag No., Part No., Trace No., Support No., Code Plate, NPT Stamp 等；製造完成之管路支撐均移置於另設的單獨庫房儲存，清潔情況良好。
3. 準備交運之管路支撐經清潔、乾燥後，小件者裝入塑膠袋密封，其餘或裝入紙箱，或用塑膠紙包裹，再裝入大木箱中並予以固定；木箱四

周及每一層中間用防水牛皮紙襯墊；木箱四周另以木框固定及補強，附入 Packing List 並於木箱外貼上 ID Marking，存放於儲存場等候交運。Packing 情況經檢查結果未發現不符合狀況。

七、查驗結果

本批 321 組之管路支撐製程品質查驗，相關品質紀錄文件經審查結果雖發現有 16 項疏失，但廠商均已立即配合完成改正。管路支撐之尺寸、清潔、包裝及交運前準備情況，經抽查結果均符合採購品質要求。故簽署 Shipment No.8-10098~8-10100 之 Product Quality Certificate (PQC) 共 3 份，同意廠商交運。

肆、出國期間所遭遇之困難與特殊事項

無。

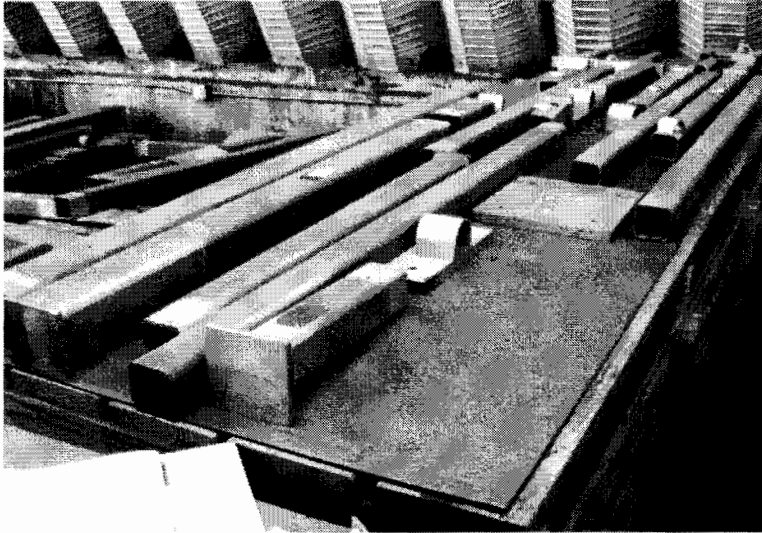
伍、心得與建議

- 一、Lisega 公司承製本公司核四工程 MS033A 核能級高荷重管路支撐及 MS033B 核能級管路支撐。迄今為止，MS033A 部份，曾經委託 S&W 公司派員執行 3 次檢驗；MS033B 部份，曾經委託 S&W 公司派員執行 9 次檢驗，委託台崧公司派員執行 2 次檢驗，加上本次由本公司自行派員前往檢驗；共 15 次的檢驗結果，均未發現重大有實質影響品質的不符合情況。由於前 15 次檢驗的結果，及 Lisega 公司為持有 ASME NPT Cetificate 之管路支撐專業製造廠商，其製品應能具有一定的品質水準，而 MS033B 核能級管路支撐，數量雖多（約 12000 組），但均屬材料及製作技術較為簡單之一般荷重管路支撐。在兼顧品質與節省檢驗時間、費用的考量下，建議往後對 MS033B 之檢驗工作，可視情況以個案方式，免除實際派員前往工廠執行交運前檢驗，改請廠商將 QRP 及 PQC 寄來台北審查及簽署。
- 二、上述建議已經由核火工處於 96.8.22「MS033B 廠商交貨延宕問題討論會議」中提出討論，並決議請核安處之檢驗，以在台灣之文件審查為主，不須實體檢驗。

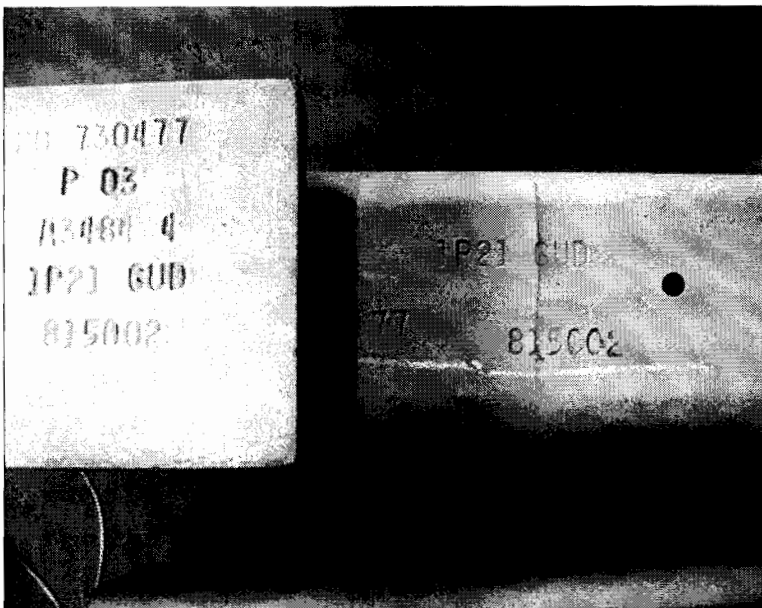
陸、附件

- 附件 1：品質查驗工作相關照片（共 3 頁）
- 附件 2：Product Quality Certificate(PQC)（共 6 頁）
- 附件 3：Quality Records Package(QRP)（共 17 頁）
- 附件 4：Certificate for the Inspection Scope at Lisega（共 1 頁）

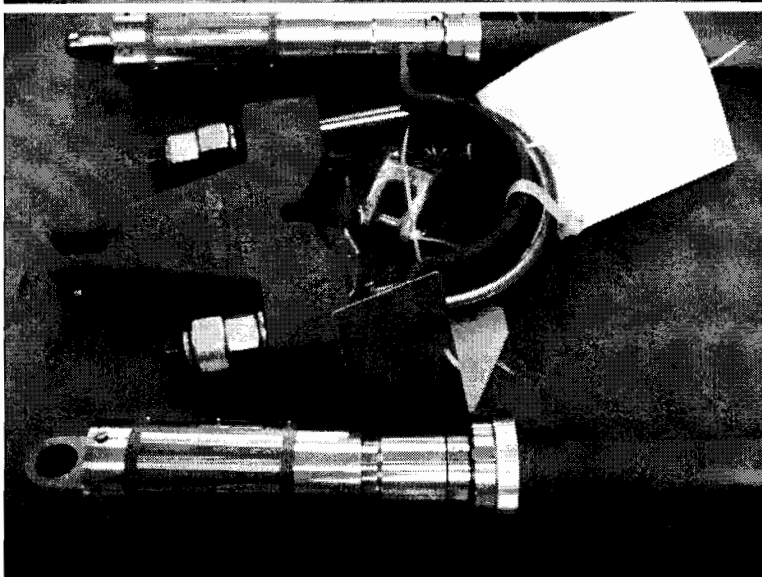
【附件 1】



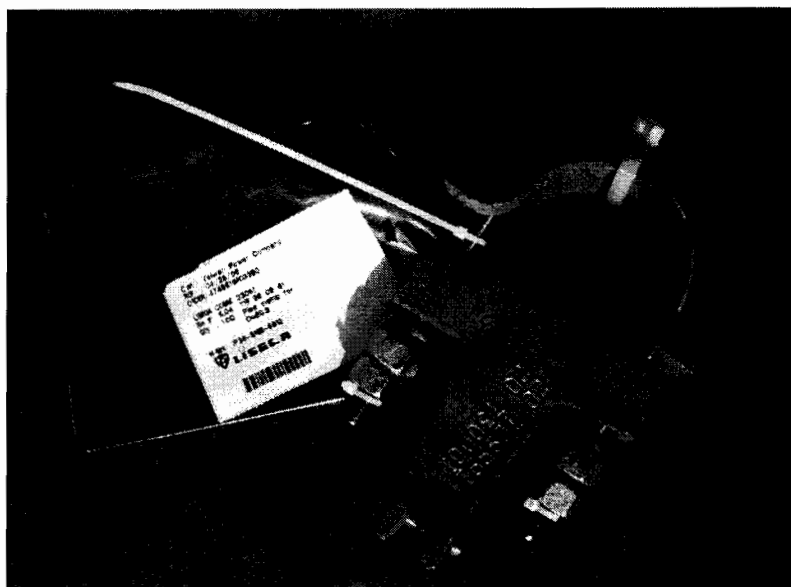
Pipe Support 之
尺寸檢查



查對Pipe Support
(1P21-GUD-815002)
之材質



檢查Pipe Support
(1P26-SNB-5817)之
清潔情況



檢查 Pipe Support
(1P26-SNB-5812)之
標識



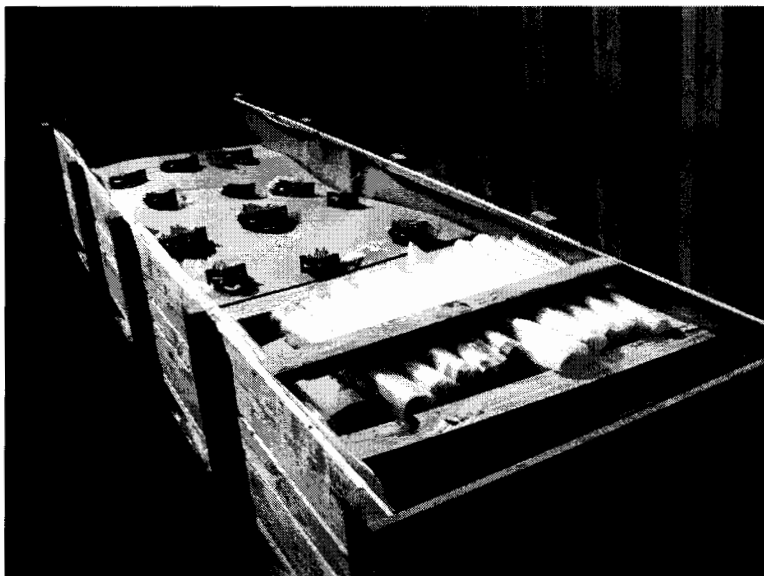
NPT Code Plate
以鉚釘固定於
Pipe Support
(1T22-PRST-5002
)上



Pipe Support
裝箱前檢查情
況



Pipe Support
之裝箱情況



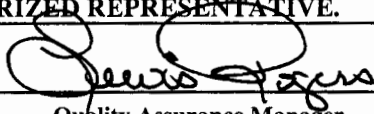
Pipe Support
之裝箱情況



Pipe Support
之裝箱情況

LUNG MEN PROJECT
RELEASE FOR SHIPMENT

Product Quality Certificate

CLIENT: Taiwan Power Company		TPC CONTRACT NO. 8749511M033B0	SHIPMENT NO. 8-10098
TPC SPECIFICATION NO. 874-MS-033B		REV. 0	ADDENDA 2
PRODUCT DESCRIPTION ASME Section III Div. 1 Class 2 & 3 Pipe Supports			
<u>SUPPLIER'S CERTIFICATION</u>			
I HEREBY CERTIFY THAT THE PRODUCT(S) IDENTIFIED HEREIN HAVE BEEN MANUFACTURED UNDER A CONTROLLED PROGRAM AND ARE IN COMPLIANCE WITH THE APPLICABLE CODES, STANDARDS AND SPECIFICATIONS LISTED IN TPC PURCHASE SPECIFICATION REQUIREMENT.			
<u>ITEM NO.</u>	<u>QUANTITY</u>		
1	160	BONI Supports for Lungmen Unit 1 as detailed on the attachment.	
ALL SUPPORTING DOCUMENTATION REQUIRED BY THE ABOVE REFERENCED DOCUMENTS HAVE BEEN ISSUED TO TPC			
AUTHORIZED REPRESENTATIVE.			
SIGNED 		DATE 08/10/07	
TITLE Quality Assurance Manager		SUPPLIER Lisega, Inc.	
<u>TPC REPRESENTATIVE CERTIFICATION¹</u>			
THIS IS TO CERTIFY THAT EVIDENCE SUPPORTING THE ABOVE SUPPLIER'S CERTIFICATION STATEMENT HAS BEEN REVIEWED AND THAT NO DEVIATIONS FROM QUALITY ASSURANCE REQUIREMENTS HAVE BEEN FOUND UNLESS NOTED BELOW."			
SIGNED Y. C. Chion		DATE Aug. 10, 2007	
TITLE TPC Representative		TPC Notice No. NA	
DEVIATIONS/NONCONFORMANCES FROM PURCHASE ORDER REQUIREMENTS			
None			

1 - The TPC representative's certification does not release the supplier from their responsibility to provide work products that are acceptable under the contract nor does it preclude TPC's right to reject nonconforming work.

0001

Attachment to Product Quality Certificate
Shipment No. 8-10098

Support

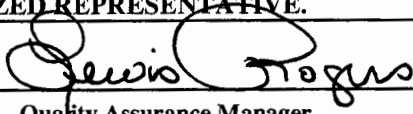
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1B31-GUD-800127	1P13-GUD-802803	1B21-GUD-811326	1B21-GUD-816909
1B31-GUD-800302	1B31-GUD-802805	1E11-GUD-811401	1B21-GUD-817001
1B31-GUD-800401	1P13-GUD-802807	1E11-GUD-811402	1B21-GUD-817003
1B31-GUD-800402	1P13-GUD-802812	1B21-GUD-811501	1B21-GUD-817004
1B31-GUD-800419	1P13-GUD-802813	1B21-GUD-811502	1B21-GUD-817007
1B31-GUD-800602	1P13-GUD-802814	1B21-GUD-811512	1B21-GUD-817010
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1B31-GUD-800617	1B31-GUD-802820	1B21-GUD-813702	1B21-GUD-817110
1B31-GUD-800618	1B31-GUD-802823	1B21-GUD-813713	1B21-GUD-817112
1B31-GUD-800701	1B31-GUD-803015	1B21-GUD-813914	1B21-GUD-817141
1B31-GUD-800718	1E11-GUD-805302	1B21-GUD-814204	1B21-GUD-817158
1B31-GUD-800803	1B21-GUD-807902	1B21-GUD-814304	1B21-GUD-817160
1T62-GUD-800902	1B21-GUD-807903	1B21-GUD-814504	1B21-GUD-817161
1N22-GUD-800908	1B21-GUD-807904	1B21-GUD-814506	1B21-GUD-817162
1B31-GUD-800921	1B21-GUD-808002	1B21-GUD-814511	1B21-GUD-817163
1B31-GUD-800923	1B21-GUD-808003	1B21-GUD-814516	1B21-GUD-817169
1B31-GUD-801002	1B21-GUD-808101	1B21-GUD-814520	1B21-GUD-817170
1B31-GUD-801013	1B21-GUD-808102	1B21-GUD-814523	1B21-GUD-817201
1B31-GUD-801017	1B21-GUD-809103	1B21-GUD-814524	1P21-GUD-817518
1B31-GUD-801202	1E11-GUD-809702	1B21-GUD-814525	1P21-GUD-817545
1B31-GUD-801206	1E11-GUD-809802	1B21-GUD-814527	1P21-GUD-817546
1B31-GUD-801213	1B21-GUD-810106	1B21-GUD-814543	1P21-GUD-817618
1B31-GUD-801217	1B21-GUD-810215	1B21-GUD-814544	1P21-GUD-817619
1P11-GUD-801307	1B21-GUD-810521	1B21-GUD-814604	1P21-GUD-817621
1B31-GUD-801404	1B21-GUD-810522	1B21-GUD-814617	1P21-GUD-817623
1B31-GUD-801517	1B21-GUD-810526	1B21-GUD-814627	1P21-GUD-817627
1B31-GUD-801602	1B21-GUD-810705	1B21-GUD-815507	1P21-GUD-817628
1G31-GUD-801703	1B21-GUD-810706	1B21-GUD-815540	1P21-GUD-817629
1B31-GUD-801901	1B21-GUD-810722	1B21-GUD-815570	1P21-GUD-817633
1B31-GUD-801902	1B21-GUD-810903	1B21-GUD-815605	1P21-GUD-817656
1B31-GUD-802118	1B21-GUD-810913	1B21-GUD-815820	1P21-GUD-817710
1B31-GUD-802402	1B21-GUD-810914	1B21-GUD-815840	1P21-PRST-817711
1B31-GUD-802418	1B21-GUD-810923	1B21-GUD-815841	1P21-GUD-817712
1B31-GUD-802501	1B21-GUD-811001	1B21-GUD-815855	1P21-GUD-817717
1B31-GUD-802505	1B21-GUD-811012	1P21-GUD-816507	1P21-GUD-817722
1B31-GUD-802515	1B21-GUD-811015	1P21-GUD-816605	1P21-GUD-817801
1B31-GUD-802605	1B21-GUD-811023	1B21-GUD-816901	1P21-GUD-817806
1B31-GUD-802703	1B21-GUD-811312	1B21-GUD-816902	1P21-GUD-817821



0002

**LUNG MEN PROJECT
RELEASE FOR SHIPMENT**

Product Quality Certificate

CLIENT: Taiwan Power Company	TPC CONTRACT NO. 8749511M033B0	SHIPMENT NO. 8-10099
TPC SPECIFICATION NO. 874-MS-033B	REV. 0	ADDENDA 2
PRODUCT DESCRIPTION ASME Section III Div. 1 Class 2 & 3 Pipe Supports		
<u>SUPPLIER'S CERTIFICATION</u>		
I HEREBY CERTIFY THAT THE PRODUCT(S) IDENTIFIED HEREIN HAVE BEEN MANUFACTURED UNDER A CONTROLLED PROGRAM AND ARE IN COMPLIANCE WITH THE APPLICABLE CODES, STANDARDS AND SPECIFICATIONS LISTED IN TPC PURCHASE SPECIFICATION REQUIREMENT.		
<u>ITEM NO.</u>	<u>QUANTITY</u>	
1	126	BONI Supports for Lungmen Unit 1 as detailed on the attachment.
ALL SUPPORTING DOCUMENTATION REQUIRED BY THE ABOVE REFERENCED DOCUMENTS HAVE BEEN ISSUED TO TPC		
<u>AUTHORIZED REPRESENTATIVE.</u>		
SIGNED 		DATE 08-10-07
TITLE Quality Assurance Manager		SUPPLIER Lisega, Inc.
<u>TPC REPRESENTATIVE CERTIFICATION¹</u>		
THIS IS TO CERTIFY THAT EVIDENCE SUPPORTING THE ABOVE SUPPLIERS' CERTIFICATION STATEMENT HAS BEEN REVIEWED AND THAT NO DEVIATIONS FROM QUALITY ASSURANCE REQUIREMENTS HAVE BEEN FOUND UNLESS NOTED BELOW."		
SIGNED Y. C. Chion		DATE Aug. 10, 2007
TITLE TPC Representative		TPC Notice No. NA
DEVIATIONS/NONCONFORMANCES FROM PURCHASE ORDER REQUIREMENTS		
None		

1 - The TPC representative's certification does not release the supplier from their responsibility to provide work products that are acceptable under the contract nor does it preclude TPC's right to reject nonconforming work.

0001

Attachment to Product Quality Certificate
Shipment No. 8-10099

Support

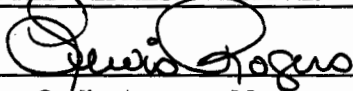
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1P26-GUD-800103	1K11-GUD-800604	1P21-GUD-808206	
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1P11-GUD-800334	1P21-GUD-801805	1P21-GUD-810401	
1P11-GUD-800336	1P21-GUD-802203	1P21-GUD-810403	
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1P11-GUD-800342	1P21-GUD-802305	1B21-GUD-812101	
1P11-GUD-800343	1P21-GUD-802404	1B21-GUD-812104	
1P11-GUD-800345	1G31-GUD-803201	1B21-GUD-812107	
1G51-GUD-800403	1P21-GUD-803203	1P21-GUD-813301	
1P21-GUD-800405	1P21-GUD-803304	1P21-GUD-814202	
1K11-GUD-800501	1P21-GUD-803305	1P21-GUD-814602	
1K11-GUD-800502	1P21-GUD-803404	1P21-GUD-815002	



0002

**LUNG MEN PROJECT
RELEASE FOR SHIPMENT**

Product Quality Certificate

CLIENT: Taiwan Power Company		IPC CONTRACT NO. 8749511M033B0	SHIPMENT NO. 8-10100						
TPC SPECIFICATION NO. 874-MS-033B		REV. 0	ADDENDA 2						
PRODUCT DESCRIPTION ASME Section III Div. 1 Class 2 & 3 Pipe Supports									
<u>SUPPLIER'S CERTIFICATION</u> I HEREBY CERTIFY THAT THE PRODUCT(S) IDENTIFIED HEREIN HAVE BEEN MANUFACTURED UNDER A CONTROLLED PROGRAM AND ARE IN COMPLIANCE WITH THE APPLICABLE CODES, STANDARDS AND SPECIFICATIONS LISTED IN TPC PURCHASE SPECIFICATION REQUIREMENT. <table style="width: 100%; border: none;"> <thead> <tr> <th style="text-align: left; border-bottom: 1px solid black;"><u>ITEM NO.</u></th> <th style="text-align: left; border-bottom: 1px solid black;"><u>QUANTITY</u></th> <th style="border: none;"></th> </tr> </thead> <tbody> <tr> <td style="padding-top: 10px;">1</td> <td style="padding-top: 10px;">35</td> <td style="padding-top: 10px; vertical-align: top;">BOP Supports for Lungmen Unit 1 as detailed on the attachment.</td> </tr> </tbody> </table>				<u>ITEM NO.</u>	<u>QUANTITY</u>		1	35	BOP Supports for Lungmen Unit 1 as detailed on the attachment.
<u>ITEM NO.</u>	<u>QUANTITY</u>								
1	35	BOP Supports for Lungmen Unit 1 as detailed on the attachment.							
ALL SUPPORTING DOCUMENTATION REQUIRED BY THE ABOVE REFERENCED DOCUMENTS HAVE BEEN ISSUED TO TPC									
AUTHORIZED REPRESENTATIVE.									
SIGNED 		DATE 08/10/07							
TITLE Quality Assurance Manager		SUPPLIER Lisega, Inc.							
<u>TPC REPRESENTATIVE CERTIFICATION¹</u> THIS IS TO CERTIFY THAT EVIDENCE SUPPORTING THE ABOVE SUPPLIERS' CERTIFICATION STATEMENT HAS BEEN REVIEWED AND THAT NO DEVIATIONS FROM QUALITY ASSURANCE REQUIREMENTS HAVE BEEN FOUND UNLESS NOTED BELOW."									
SIGNED <i>F. C. Chion</i>		DATE Aug. 10, 2007							
TITLE TPC Representative		TPC Notice No. NA							
DEVIATIONS/NONCONFORMANCES FROM PURCHASE ORDER REQUIREMENTS None									

¹ - The TPC representative's certification does not release the supplier from their responsibility to provide work products that are acceptable under the contract nor does it preclude TPC's right to reject nonconforming work.

000001

Attachment to Product Quality Certificate
Shipment No. 8-10100

Support

1T22-PRST-5000
1T22-PRST-5001
1T22-PRST-5002
1T22-PRST-5003
1T22-PRST-5004
1T22-PRST-5005
1T22-PRST-5007
1P13-GUD-5529
1P13-GUD-5570
1P13-GUD-5571
1P13-GUD-5572
1P26-SNB-5802
1P26-SNB-5804
1P26-PRST-5806
1P26-SNB-5810
1P26-SNB-5812
1P26-PRST-5814
1P26-SNB-5817
1P26-SNB-5819
1P26-PRST-5821
1P26-SNB-5825
1P26-SNB-5827
1P26-PRST-5829
1P26-SNB-5832
1P26-SNB-5834
1P26-PRST-5836
1P26-SNB-5840
1P26-SNB-5842
1P26-PRST-5844
1W12-SPR-5939
1W12-SPR-5941
1W12-SPR-5943
1W12-SPR-5945
1W12-SPR-5947
1W12-SPR-5949



Rev. A

 Quality Records Package
 Documentation No. : 33061.MS033B.8-10098

Page 1/7

Customer:	Taiwan Power Company LUNG MEN Project Fourth Nuclear Power Plant Unit 1 Pipe Supports
Customer PO-No.:	8749511M033B0
Customer Specification No.:	874-MS-033B, Rev. 0 Amendment 2 With Specific Technical Requirements 31113.62.2413 for BONI Delivery 2
LISEGA AG Project No.:	33061
LISEGA AG PO No.:	87547-9-41500
LISEGA Inc Job No.:	43936

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<u>Cert No.</u>	<u>Binder No.</u>
	1

1.0 Release for Shipment

- | | |
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| 1.1 | Product Quality Certificate |
| 1.2 | LISEGA General Delivery Certificate of Compliance |
| 1.3 | ITP Inspection Test Plan |

Total Pages Section 1 11**2.0 Certification of Hangers**

- | | | |
|-----|--|----------|
| | <ul style="list-style-type: none"> • LISEGA Serial Certificate of Compliance (C of C) • Data Report Form N2 (as applicable) • As Built Drawing • Visual and Dimensional Inspection Report and Coating Inspection Report • Non-Destructive Examination (as applicable) | |
| 2.1 | 1B31-GUD-800118 | 20701633 |
| 2.2 | 1B31-GUD-800119 | 20701634 |
| 2.3 | 1B31-GUD-800127 | 20701635 |
| 2.4 | 1B31-GUD-800302 | * |
| 2.5 | 1B31-GUD-800401 | * |
| 2.6 | 1B31-GUD-800402 | * |
| 2.7 | 1B31-GUD-800419 | 20701636 |



		<u>Cert No.</u>	<u>Bind No.</u>
2.8	1B31-GUD-800602	20701637	
2.9	1B31-GUD-800604	20701638	
2.10	1B31-GUD-800617	20701645	
2.11	1B31-GUD-800618	20701646	
2.12	1B31-GUD-800701	*	
2.13	1B31-GUD-800718	20701647	
2.14	1B31-GUD-800803	20701648	
2.15	1T62-GUD-800902	*	
2.16	1N22-GUD-800908	*	
2.17	1B31-GUD-800921	*	
2.18	1B31-GUD-800923	20701649	
2.19	1B31-GUD-801002	*	
2.20	1B31-GUD-801013	20701650	
2.21	1B31-GUD-801017	20701651	
2.22	1B31-GUD-801202	20701652	
2.23	1B31-GUD-801206	*	
2.24	1B31-GUD-801213	20701653	
2.25	1B31-GUD-801217	20701654	
2.26	1P11-GUD-801307	*	
2.27	1B31-GUD-801404	20701655	
2.28	1B31-GUD-801517	*	
2.29	1B31-GUD-801602	*	
2.30	1G31-GUD-801703	*	
2.31	1B31-GUD-801901	*	
2.32	1B31-GUD-801902	*	
2.33	1B31-GUD-802118	20701656	
2.34	1B31-GUD-802402	20701657	
2.35	1B31-GUD-802418	20701658	
2.36	1B31-GUD-802501	*	
2.37	1B31-GUD-802505	*	
2.38	1B31-GUD-802515	20701659	
2.39	1B31-GUD-802605	20701660	
2.40	1B31-GUD-802703	*	
2.41	1B31-GUD-802717	20701661	
2.42	1B31-GUD-802802	*	
2.43	1P13-GUD-802803	*	
2.44	1B31-GUD-802805	*	
2.45	1P13-GUD-802807	*	



		<u>Cert No.</u>	<u>Bindi No.</u>
2.46	1P13-GUD-802812	*	
2.47	1P13-GUD-802813	*	
2.48	1P13-GUD-802814	*	
2.49	1P13-GUD-802817	*	
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2.51	1B31-GUD-802823	20701663	
2.52	1B31-GUD-803015	20701664	
2.53	1E11-GUD-805302	*	
2.54	1B21-GUD-807902	20701771	
2.55	1B21-GUD-807903	20701772	
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2.58	1B21-GUD-808003	20701777	
2.59	1B21-GUD-808101	20701779	
2.60	1B21-GUD-808102	20701780	
2.61	1B21-GUD-809103	20701781	
2.62	1E11-GUD-809702	*	
2.63	1E11-GUD-809802	*	
2.64	1B21-GUD-810106	20701782	
2.65	1B21-GUD-810215	20701783	
2.66	1B21-GUD-810521	20701785	
2.67	1B21-GUD-810522	20701786	
2.68	1B21-GUD-810526	20701787	
2.69	1B21-GUD-810705	20701789	2
2.70	1B21-GUD-810706	20701790	
2.71	1B21-GUD-810722	20701793	
2.72	1B21-GUD-810903	20701794	
2.73	1B21-GUD-810913	20701795	
2.74	1B21-GUD-810914	20701796	
2.75	1B21-GUD-810923	20701797	
2.76	1B21-GUD-811001	20701798	
2.77	1B21-GUD-811012	20701800	
2.78	1B21-GUD-811015	20701801	
2.79	1B21-GUD-811023	20701802	
2.80	1B21-GUD-811312	20701805	
2.81	1B21-GUD-811313	20701806	
2.82	1B21-GUD-811324	20701808	
2.83	1B21-GUD-811326	20701809	
2.84	1E11-GUD-811401	*	
2.85	1E11-GUD-811402	*	



		<u>Cert No.</u>	<u>Bind No.</u>
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2.88	1B21-GUD-811512	20701812	
2.89	1B21-GUD-813303	20701813	
2.90	1B21-GUD-813702	20701278	
2.91	1B21-GUD-813713	20701279	
2.91A	1B21-GUD-813914	20701280	
2.92	1B21-GUD-814204	20701281	
2.93	1B21-GUD-814304	20701283	
2.94	1B21-GUD-814504	*	
2.95	1B21-GUD-814506	20701284	
2.96	1B21-GUD-814511	20701285	
2.97	1B21-GUD-814516	20701286	
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2.99	1B21-GUD-814523	20701313	
2.100	1B21-GUD-814524	20701314	
2.101	1B21-GUD-814525	20701315	
2.102	1B21-GUD-814527	20701316	
2.103	1B21-GUD-814543	20701317	
2.104	1B21-GUD-814544	20701318	
2.105	1B21-GUD-814604	20701319	
2.106	1B21-GUD-814617	20701320	
2.106A	1B21-GUD-814627	20701321	
2.107	1B21-GUD-815507	20701322	
2.108	1B21-GUD-815540	20701323	
2.109	1B21-GUD-815570	20701324	
2.110	1B21-GUD-815605	20701325	
2.110A	1B21-GUD-815820	20701326	
2.110B	1B21-GUD-815840	20701327	
2.110C	1B21-GUD-815841	20701328	
2.111	1B21-GUD-815855	20701329	
2.112	1P21-GUD-816507	*	
2.113	1P21-GUD-816605	*	
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2.115	1B21-GUD-816902	20702810	
2.116	1B21-GUD-816903	20702811	
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2.119	1B21-GUD-817001	20701330	
2.120	1B21-GUD-817003	20702815	



		<u>Cert No.</u>	<u>Bind No.</u>
2.121	1B21-GUD-817004	20702816	
2.122	1B21-GUD-817007	20701331	
2.123	1B21-GUD-817010	20702817	
2.124	1B21-GUD-817013	20702819	
2.125	1B21-GUD-817110	20702820	
2.126	1B21-GUD-817112	20702821	
2.127	1B21-GUD-817141	20702823	
2.128	1B21-GUD-817158	20701332	
2.129	1B21-GUD-817160	20701629	
2.130	1B21-GUD-817161	20701630	3
2.131	1B21-GUD-817162	20701631	
2.132	1B21-GUD-817163	20702825	
2.133	1B21-GUD-817169	20702826	
2.134	1B21-GUD-817170	20701632	
2.135	1B21-GUD-817201	20702827	
2.136	1P21-GUD-817518	*	
2.137	1P21-GUD-817545	*	
2.138	1P21-GUD-817546	*	
2.139	1P21-GUD-817618	*	
2.140	1P21-GUD-817619	*	
2.141	1P21-GUD-817621	*	
2.142	1P21-GUD-817623	*	
2.143	1P21-GUD-817627	*	
2.144	1P21-GUD-817628	*	
2.145	1P21-GUD-817629	*	
2.146	1P21-GUD-817633	*	
2.147	1P21-GUD-817656	*	
2.148	1P21-GUD-817710	*	
2.149	1P21-PRST-817711	20729610	
2.150	1P21-GUD-817712	*	
2.151	1P21-GUD-817717	*	
2.152	1P21-GUD-817722	*	
2.153	1P21-GUD-817801	20729604	
2.154	1P21-GUD-817806	20729605	
2.155	1P21-GUD-817821	20729606	

Total Pages Section 2 715

* Note: See Section 3.0 for Additional Standard Product Information



Cert No. Binder No.

3.0 Certification of LISEGA Standard Products

- LISEGA Serial Certificate of Compliance (C of C)
- NF-1 Form (as applicable)
- Design Report Summary
- As Built Drawing
- Visual and Dimensional Inspection Report and Coating Inspection Report (as applicable)
- Non-Destructive Examination Report (as applicable)

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4.0 CMTR's for Steel Construction and Parts of Standard Products

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4.2	A3666-8	103447
4.3	A3666-3	103442
4.4	A3666-2	103441
4.5	A3614-1	103385
4.5A	A3591-1	103168
4.6	A3557-1	103160
4.6A	A3581-1	103126
4.7	A3520-1	102916
4.8	A3501-2	102890
4.9	A3482-5	102813
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4.11	A3494-3	102807
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4.13	A3518-1	102797
4.14	A3502-1	102749
4.15	A3484-5	102713
4.16	A3484-4	102712
4.17	A3484-3	102711
4.18	A3484-2	102710
4.19	A3481-4	102705
4.20	A3420-7	102603
4.21	A3420-6	102602
4.22	A3465-1	102525
4.23	A3440-1	102365
4.24	A3385-4	102157
4.25	A3384-1	102145
4.26	A3371-1	102109



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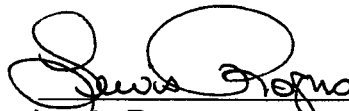
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4.27	A3376-8	102108	
4.28	A3375-8	102100	
4.29	A3375-1	102093	
4.30	A3328-3	101833	
4.31	A3330-5	101803	
4.32	A3330-2	101800	
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5.1	Welding Procedure Specifications		
5.2	Procedure Qualification Records		
5.3	CMTR Welding Wire		
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<u>6.0</u>	<u>SIR / NCR / NUC / (As Applicable)</u>		
Total Pages Section 6		0	
Total Pages		939	

Newport, August 8, 2007

LISEGA INC


Lewis Rogers
Quality Assurance Manager

08/08/07

Customer:	Taiwan Power Company LUNG MEN Project Fourth Nuclear Power Plant Unit 1 Pipe Supports
Customer PO-No.:	8749511M033B0
Customer Specification No.:	874-MS-033B, Rev. 0 Amendment 2 With Specific Technical Requirements 31113.62.2413 for BONI Delivery 1
LISEGA AG Project No.:	33061
LISEGA AG PO No.:	87547-9-41500
LISEGA Inc Job No.:	43936

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- | | |
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| 1.1 | Product Quality Certificate |
| 1.2 | LISEGA General Delivery Certificate of Compliance |
| 1.3 | ITP Inspection Test Plan |

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2.0 Certification of Hangers

- | | | |
|-----|--|----------|
| | <ul style="list-style-type: none"> • LISEGA Serial Certificate of Compliance (C of C) • Data Report Form N2 (as applicable) • As Built Drawing • Visual and Dimensional Inspection Report and Coating Inspection Report • Non-Destructive Examination (as applicable) | |
| 2.1 | 1P21-ANC-1243 | 20730541 |
| 2.2 | 1P21-ANC-1246 | 20730140 |
| 2.3 | 1P21-ANC-1409 | 20708256 |
| 2.4 | 1P21-ANC-1410 | 20730542 |
| 2.5 | 1P21-ANC-1412 | 20708257 |
| 2.6 | 1G31-GUD-2146 | 20708380 |
| 2.7 | 1P26-GUD-800103 | 20730376 |



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2.8	1P26-GUD-800104	20730117	
2.9	1K11-GUD-800106	20730110	
2.10	1K11-GUD-800107	20730042	
2.11	1K11-GUD-800109	20730043	
2.12	1P26-GUD-800127	20730378	
2.13	1P26-GUD-800128	20730071	
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2.16	1P11-GUD-800301	20730173	
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2.19	1P11-GUD-800308	20730061	
2.20	1P11-GUD-800317	*	
2.21	1P11-GUD-800319	*	
2.22	1P11-GUD-800320	*	
2.23	1P11-GUD-800321	*	
2.24	1P11-GUD-800322	*	
2.25	1P11-GUD-800323	20730064	
2.26	1P11-GUD-800326	20730065	
2.27	1P11-GUD-800327	20730066	
2.28	1P11-GUD-800331	20730091	
2.29	1P11-GUD-800332	20730175	
2.30	1P11-GUD-800333	20730092	
2.31	1P11-GUD-800334	20730052	
2.32	1P11-GUD-800336	20730093	
2.33	1P11-GUD-800341	20730176	
2.34	1P11-GUD-800342	20730114	
2.35	1P11-GUD-800343	*	
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2.37	1P11-GUD-800345	20730094	
2.38	1G51-GUD-800403	*	
2.39	1P21-GUD-800405	20729581	
2.40	1K11-GUD-800501	20730111	
2.41	1K11-GUD-800502	20730058	
2.42	1G51-GUD-800503	*	
2.43	1K11-GUD-800503	20730059	
2.44	1G51-GUD-800504	*	
2.45	1K11-GUD-800504	20730046	



		<u>Cert No.</u>	<u>Bind No.</u>
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2.47	1K11-GUD-800603	20730112	
2.48	1K11-GUD-800604	20730047	
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2.51	1P31-GUD-800703	20730382	
2.52	1P31-GUD-800705	20730287	
2.53	1P31-GUD-800711	20730288	
2.54	1G51-GUD-800801	*	
2.55	1G51-GUD-800802	*	
2.56	1P31-GUD-800804	20730289	2
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2.62	1P21-GUD-801301	20702485	
2.63	1G51-GUD-801302	*	
2.64	1P21-GUD-801302	20702486	
2.65	1G51-GUD-801402	*	
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2.75	1P21-GUD-802305	20702489	
2.76	1P21-GUD-802404	*	
2.77	1G31-GUD-803201	20730154	
2.78	1P21-GUD-803203	20729587	
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2.80	1P21-GUD-803305	*	
2.81	1P21-GUD-803404	*	
2.82	1P21-GUD-803502	*	
2.83	1P21-GUD-803506	*	
2.84	1P21-GUD-803507	*	
2.85	1G31-GUD-803702	20708426	



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2.86	1P21-GUD-808102	*	
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2.88	1P21-GUD-808206	20730411	
2.89	1P21-GUD-808207	20730123	
2.90	1P21-GUD-808303	20730412	
2.91	1P21-GUD-808309	20730424	
2.92	1P21-GUD-808310	20730425	
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2.94	1P21-GUD-808503	20730413	
2.95	1P21-GUD-808604	*	
2.96	1P21-GUD-808609	*	
2.97	1P21-GUD-808610	*	
2.98	1G31-GUD-809701	20708335	
2.99	1P21-GUD-809701	20730414	
2.100	1P21-GUD-809805	*	
2.101	1P21-GUD-809806	*	
2.102	1P21-GUD-809807	20730416	
2.103	1P21-GUD-809808	*	
2.104	1P21-GUD-809809	*	
2.105	1P21-GUD-809810	20730417	
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2.108	1P21-GUD-809814	*	
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2.110	1P21-GUD-809817	*	
2.111	1P21-GUD-809818	*	
2.112	1P21-GUD-810401	20730158	
2.113	1P21-GUD-810403	*	
2.114	1G31-GUD-811201	20729549	
2.115	1B21-GUD-812101	20730095	
2.116	1B21-GUD-812104	20730109	
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2.120	1P21-GUD-814202	20730160	
2.121	1P21-GUD-814602	20730161	
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2.124	1P21-GUD-815005	20730163	
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2.127	1P21-GUD-815706	20730478	
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2.131	1P21-GUD-815905	20730166	
2.132	1P21-GUD-816202	20730167	

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* Note: See Section 3.0 for Additional Standard Product Information

3.0 Certification of LISEGA Standard Products

3

- LISEGA Serial Certificate of Compliance (C of C)
- NF-1 Form (as applicable)
- Design Report Summary
- As Built Drawing
- Visual and Dimensional Inspection Report and Coating Inspection Report (as applicable)
- Non-Destructive Examination Report (as applicable)

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4.11	A3666-9	103448
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4.13	A3666-6	103445
4.14	A3666-4	103443
4.15	A3650-2	103409
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4.17	A3614-1	103385



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4.18	A3660-7	103363	
4.19	A3622-9	103229	
4.20	A3622-1	103221	
4.21	A3594-1	103174	
4.22	A3592-1	103170	
4.23	A3591-2	103169	
4.24	A3591-1	103168	
4.25	A3587-1	103164	
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4.27	Blank Pages		
4.28	A3510-2	102970	
4.29	A3510-1	102969	
4.30	A3425-5	102949	
4.31	A3508-1	102895	
4.32	A3525-5	102876	
4.33	A3482-5	102813	
4.34	A3494-4	102808	
4.35	A3494-3	102807	
4.36	A3494-2	102806	
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4.38	A3518-1	102797	
4.39	A3519-2	102789	
4.40	A3485-1	102752	
4.41	A3502-2	102750	
4.42	A3502-1	102749	
4.43	A3484-4	102712	
4.44	A3484-3	102711	
4.45	A3484-2	102710	
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4.50	A3391-2	102566	
4.51	A3465-1	102525	
4.52	A3440-1	102365	
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4.54	A3374-2	102115	
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4.56	A3376-7	102107	
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4.58	A3375-1	102093	
4.58A	A3367-1	101983	
4.59	A3335-2	101828	
4.60	A3330-9	101807	
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Total Pages Section 6		<u>0</u>	
Total Pages		<u>1047</u>	

Newport, August 7, 2007

L I S E G A I N C

 08/07/07
Lewis Rogers
Quality Assurance Manager

Customer:	Taiwan Power Company LUNG MEN Project Fourth Nuclear Power Plant Unit 1 Pipe Supports
Customer PO-No.:	8749511M033B0
Customer Specification No.:	874-MS-033B, Rev. 0 Amendment 2 With Specific Technical Requirements 874-M0051B for BOP
LISEGA AG Project No.:	33061
LISEGA AG PO No.:	85574-9-41500
LISEGA Inc Job No.:	44055

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	<u>1</u>

1.0 Release for Shipment

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| 1.1 | Product Quality Certificate |
| 1.2 | LISEGA General Delivery Certificate of Compliance |
| 1.3 | ITP Inspection Test Plan |

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2.0 Certification of Hangers

- LISEGA Serial Certificate of Compliance (C of C)
- Data Report Form N2 (as applicable)
- As Built Drawing
- Visual and Dimensional Inspection Report and Coating Inspection Report
- Non-Destructive Examination (as applicable)

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2.2	1T22-PRST-5001	20612417
2.3	1T22-PRST-5002	20612418
2.4	1T22-PRST-5003	20612419
2.5	1T22-PRST-5004	20612420
2.6	1T22-PRST-5005	20612421
2.7	1T22-PRST-5007	20612422
2.8	1P13-GUD-5529	20712466
2.9	1P13-GUD-5570	20712453
2.10	1P13-GUD-5571	20712461
2.11	1P13-GUD-5572	20712465



		<u>Cert No.</u>	<u>Bind No.</u>
2.12	1P26-SNB-5802	*	
2.13	1P26-SNB-5804	*	
2.14	1P26-PRST-5806	20735529	
2.15	1P26-SNB-5810	*	
2.16	1P26-SNB-5812	*	
2.17	1P26-PRST-5814	20735530	
2.18	1P26-SNB-5817	*	
2.19	1P26-SNB-5819	*	
2.20	1P26-PRST-5821	20735531	
2.21	1P26-SNB-5825	*	
2.22	1P26-SNB-5827	*	
2.23	1P26-PRST-5829	20735532	
2.24	1P26-SNB-5832	*	
2.25	1P26-SNB-5834	*	
2.26	1P26-PRST-5836	20735533	
2.27	1P26-SNB-5840	*	
2.28	1P26-SNB-5842	*	
2.29	1P26-PRST-5844	20735534	
2.30	1W12-SPR-5939	*	
2.31	1W12-SPR-5941	*	
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2.33	1W12-SPR-5945	*	
2.34	1W12-SPR-5947	*	
2.35	1W12-SPR-5949	*	

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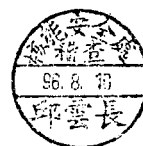
3.0 Certification of LISEGA Standard Products

- LISEGA Serial Certificate of Compliance (C of C)
- Design Report Summary
- As Built Drawing
- Visual and Dimensional Inspection Report and Coating Inspection Report (as applicable)
- Non-Destructive Examination Report (as applicable)

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4.0 CMTR's for Steel Construction and Parts of Standard Products

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4.3	A117-6	103714



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4.4	A1155-2	103713	
4.5	A3630-4	103624	
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4.6A	A3619-2	103470	
4.7	A3666-6	103445	
4.8	A3651-5	103416	
4.9	A3651-2	103414	
4.10	30700002	103294	
4.11	A3629-1	103249	
4.12	A3590-1	103175	
4.13	A3487-3	103081	
4.14	30600272	103004	
4.15	30500419	103002	
4.16	A622-3	102953	
4.17	A3461-7	102932	
4.18	A3482-5	102813	
4.19	A3388-5	102783	
4.20	A3502-2	102750	
4.21	A3417-1	102431	
4.22	A3398-3	102333	
4.23	A3367-2	101984	
4.24	A3181-3	101053	

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- 5.0 Technical**
 5.1 Welding Procedure Specifications
 5.2 Procedure Qualification Records
 5.3 CMTR Welding Wire

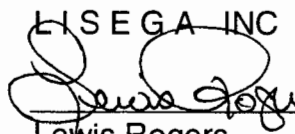
Total Pages Section 5 32

- 6.0 SIR / NCR / NUC / (as applicable)**

Total Pages Section 6 0

Total Pages 529

Newport, August 9, 2007

LISEGA INC

 Lewis Rogers
 Quality Assurance Manager

08/09/07



Certificate for the Inspection Scope at Lisega

I hereby confirm that, during the inspection period* of (month / date / year) through (month / date / year) for MS033B package at ~~Lisega AG~~ Lisega Inc., total inspection period is 4 days. Within this period, the working date/time shared for the portion of original "local portion" (CRD and BONI) and for non-original "local portion" (BOP) are:

- For original "local portion"(CRD & BONI): (month / date / year) through (month / date / year) for the supports:

CRD – (quantity of hardware and quantity of Quality Record Package) NA

BONI – (quantity of hardware and quantity of Quality Record Package) { Pipe Support: 286 sets
ORP: 6 binders

And the total duration used is 3 day(s).

- For non-original "local portion" (BOP): (month / date / year) through (month / date / year) for the supports:

BOP – (quantity of hardware and quantity of Quality Record Package) { Pipe Support: 35 sets
ORP: 1 binder

And the total duration used is 1 day(s).

TPC representative/S&W Inspector: Y. C. Chien 08/10/2007
(Signature/Date)

Lisega representative: [Signature] 08/10/07
(Signature/Date)

* Inspection period means the date/time used during the certain period to perform the inspection at the facility of Lisega AG or Lisega Inc.