



LOUISIANA
POWER & LIGHT

142 DELARONDE STREET
P O BOX 6008 • NEW ORLEANS, LOUISIANA 70174 • (504) 386-2345

MAY 27 1981

W3P81-1334
3-N31



Mr. R. L. Tedesco
Assistant Director for Licensing
U.S. Nuclear Regulatory Commission
Washington, D. C. 20555

SUBJECT: Waterford Steam Electric Station - Unit 3
Docket No. 50-382
Turbine Disc Integrity

ENCLOSURE: "LP Turbine Disc Information" (Non-proprietary)

REFERENCE: LP&L letter, L. V. Maurin to R. L. Tedesco,
W3P81-1280, dated May 14, 1981

Dear Mr. Tedesco:

The referenced letter transmitted material that will be incorporated into the FSAR to address the open item described in Draft SER Section 10.2.3.

In addition to this material we will also include in the FSAR the non-proprietary version of the attachment to Enclosure 1 of the referenced letter.

This non-proprietary version of "LP Turbine Disc Information" is enclosed for your information.

Yours very truly,

L. V. Maurin
Assistant Vice President
Nuclear Operations

LVM/MPF/dt

Attachment

cc: Mr. E. L. Blake
Mr. W. M. Stevenson

Boo!
S
1/1

8105280207

A

[] INDICATES WESTINGHOUSE PROPRIETARY LEVELS B,C,E

DATE OF REPORT = 012281

ID # : 0280106201

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION		B. MATERIAL PROPERTIES (HUB)		C. MATERIAL PROPERTIES (RIM)	
1. BUILDING BLOCK	280	1. TYPE (MIN. Y-S. (KSI))	2. SUPPLIER: UNITED STATES STEEL	1. Y-S. (KSI)	
2. UNIT WATERFORD #3		3. Y-S. (KSI)		2. U-S. (KSI)	
3. CUSTOMER: LOUISIANA PUR & LT.		4. U-Y-S. (KSI)		3. ELONGATION	
4. LPA 1		5. ELONGATION		4. R.A.	
5. LOCATION		6. R.A.		5. FATI (DEG.F)	
6. DISC #		7. FATI (DEG.F)		6. R-T- IMPACT (FT-LB.)	
7. TEST NO. TN6357		8. R-T- IMPACT (DEG.F)		7. U-S. IMPACT TEMP. (DEG.F)	
8. ROTOR NO.		9. U-S. IMPACT (DEG.F)		8. U-S. IMPACT ENG. (FT-LB.)	
9. S.O. NO.		10. U-S. IMPACT ENG. (FT-LB.)		9. U-S. KI (KSI*SQRT(IN.))	
		11. U-S. KI (KSI*SQRT(IN.))			

D. CHEMISTRY		E. CRACK DATA (KEYWAY RADIUS (IN))	
1. C	SI	1. A-CR-OP (1800 RPM) (IN.)	
2. MN	P	2. A-CR-OS (OVERSPEED) (IN.)	
3. AS	SM		
4. NI	CR		
5. AS	AL		
6. AS	CU		
7. AS	CH		
8. AS	CH		
9. AS	CH		
10. AS	CH		
11. AS	CH		

E. BORE STRESS		F. SERVICE DATA	
SPEED (RPM)	STRESS (KSI)	1. OPER. TEMP. METAL TEMP. HUB (DEG.F)	
1. 1800		2. ESTIMATED MAX O.A./D.T. (IN/HR)	
2. 2160 (120X)		3. ESTIMATED MAX D.A/D.T. (IN/MONTH)	

G. INSPECTION STATUS	
1. FIRST INSPECTION DATE	
2. OPERATING TIME AT INSPECTION (HR.)	
3. KEYWAY CRACK DEPTH (MAX.) (IN.)	
4. BORE CRACK DEPTH (MAX.) (IN.)	
5. DISK STATUS	

[] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 012281

ID # : 0280106201

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 280
2. UNIT WATERFORD #3
3. CUSTOMER: LOUISIANA PUR. & LT.
4. LPM 1
5. LOCATION GOV
6. DISC 2
7. TEST NO. TN6281
8. ROTOR NO.
9. S.O. NO.

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. [] (KSI))
2. SUPPLIER: MIDVALE HEPPENSTALL
3. Y.S. (KSI)
4. U.T.S. (KSI)
5. ELONGATION
6. P.A.
7. FATT (DEG.F)
8. R.T. IMPACT (FT.LB.)
9. U.S. IMPACT TEMP. (DEG.F)
10. U.S. IMPACT ENG. (FT.LB.)
11. U.S. KIC (KSI*SQRT(IN.))

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI)
2. U.T.S. (KSI)
3. ELONGATION
4. P.A.
5. FATT (DEG.F)
6. R.T. IMPACT (FT.LB.)
7. U.S. IMPACT TEMP. (DEG.F)
8. U.S. IMPACT ENG. (FT.LB.)
9. U.S. KIC (KSI*SQRT(IN.))

D. CHEMISTRY

C MN SI P CR MO V
NI AS SB SN AL CU S

E. BORE STRESS

SPEED (RPM) STRESS

1. 1800 (KSI)
2. 2160 (120X) (KSI)

F. CRACK DATA (KEYWAY RADIUS (IN.) [])

1. A-CR-OP (1300 RPM) (IN.)
2. A-CR-OS (OVERSPEED) (IN.)

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F)
2. ESTIMATED MAX DA/DI (IN/HR)
3. ESTIMATED MAX DA/DI (IN/MONTH)

H. INSPECTION STATUS

1. FIRST INSPECTION DATE
2. OPERATING TIME AT INSPECTION (HR.)
3. KEYWAY CRACK DEPTH (MAX.)-(IN.)
4. BORE CRACK DEPTH (MAX.)-(IN.)
5. DISK STATUS

[] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 012281

ID # : 0280106201

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 280
2. UNIT WATERFORD #3
3. CUSTOMER: LOUISIANA PWR. & LT.
4. LP# 1
5. LOCATION 60V
6. DISC# 3
7. TEST NO. TH6338
8. ROTOR NO.
9. S.O. NO.

B. MATERIAL PROPERTIES (HUB)

1. TYPE 117.
(MIN. Y.S. [] (KSI))
2. SUPPLIER: MIDVALE HEPPESTALL
3. Y.S. (KSI)
4. U.T.S. (KSI)
5. ELONGATION
6. R.A.
7. FATT (DEG.F)
8. R.T. IMPACT (FT.LB.)
9. U.S. IMPACT TEMP. (DEG.F)
10. U.S. IMPACT ENG. (FT.LB.)
11. U.S. KIC (KSI*SQRT(IN.))

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI)
2. U.T.S. (KSI)
3. ELONGATION
4. R.A.
5. FATT (DEG.F)
6. R.T. IMPACT (FT.LB.)
7. U.S. IMPACT TEMP. (DEG.F)
8. U.S. IMPACT ENG. (FT.LB.)
9. U.S. KIC (KSI*SQRT(IN.))

D. CHEMISTRY

C [] MN [] SI [] P [] CR [] MO [] V []
NI [] AS [] SB [] SW [] AL [] CU [] S []

E. BORE STRESS

SPEED (RPM) STRESS

1. 1800 (KSI) []
2. 2160 (120X) (KSI) []

F. CRACK DATA (KEYWAY RADIUS (IN))

1. A-CR-OP (1800 RPM) (IN.) []
2. A-CR-OS (OVERSPEED) (IN.) []

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F) []
2. ESTIMATED MAX DA/DT (IN/HR) []
3. ESTIMATED MAX DA/DT (IN/MONTH) []

I. INSPECTION STATUS

1. FIRST INSPECTION DATE []
2. OPERATING TIME AT INSPECTION (HR.) []
3. KEYJAY CRACK DEPTH (MAX.)-(IN.) []
4. BORE CRACK DEPTH (MAX.)-(IN.) []
5. DISK STATUS []

[] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 012281

ID # : 0280106201

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 280
2. UNIT WATERWHEEL #3
3. CUSTOMER: LOUISIANA PUR. & LT.
4. LP# 1
5. LOCATION GOV
6. DISC# 4
7. TEST NO. TN6321
8. ROTOR NO.
9. S.O. NO.

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. (KSI)) TC
2. SUPPLIER: BETHLEHEM STEEL
3. Y.S. (KSI)
4. U.T.S. (KSI)
5. ELONGATION
6. R.A.
7. FATT (DEG.F)
8. R.T. IMPACT (FT.LB.)
9. U.S. IMPACT TEMP. (DEG.F)
10. U.S. IMPACT ENG. (FT.LB.)
11. U.S. KIC (KSI*SQRT(IN.))

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI)
2. U.T.S. (KSI)
3. ELONGATION
4. R.A.
5. FATT (DEG.F)
6. R.T. IMPACT (FT.LB.)
7. U.S. IMPACT TEMP. (DEG.F)
8. U.S. IMPACT ENG. (FT.LB.)
9. U.S. KIC (KSI*SQRT(IN.))

D. CHEMISTRY

C MN SI P CR NI V
NT AS SB SN AL CU S

E. BORE STRESS

SPEED (RPM) STRESS

1. 1800 (KSI)
2. 2160 (120X) (KSI)

F. CRACK DATA (KEYWAY RADIUS (IN.) [])

1. A-CR-OP (1800 RPM) (IN.)
2. A-CR-OS (OVERSPEED) (IN.)

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F)
2. ESTIMATED MAX DA/DT (IN/HR)
3. ESTIMATED MAX DA/DT (IN/MONTH)

H. INSPECTION STATUS

1. FIRST INSPECTION DATE
2. OPERATING TIME AT INSPECTION (HR.)
3. KEYWAY CRACK DEPTH (MAX.)-(IN.)
4. BORE CRACK DEPTH (MAX.)-(IN.)
5. DISK STATUS

DATE OF REPORT : 012281

ID #: 0280106201

AP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION		B. MATERIAL PROPERTIES (HUB)		C. MATERIAL PROPERTIES (RIM)	
1. BUILDING BLOCK	250	1. TYPE	(MIN. Y-S. TENSILE STRENGTH) (KSI)		
2. UNIT	MATERIAL NO.	2. SUPPLIER	(KSI)		
3. CUSTOMER:	LOUISIANA PUR- & LT.	3. Y-T S. (KSI)			
4. L.P.R.	GOV	4. U-T S. (KSI)			
5. LOCATION	S	5. ELONGATION			
6. DISC		6. R.A.			
7. TEST NO.	TM0599	7. F.T.H. (DEG. F)			
8. ROTOR NO.		8. IMPACT (FT-LB.)			
9. S.O. NO.		9. U.S. IMPACT TEMP. (DEG. F)			
		10. U.S. IMPACT ENG. (FT-LB.)			
		11. U.S. KIC (KSI-IN ^{3/2})			

D. CHEMISTRY

	C	MH	SI	P	IR	MO	V
[]	[]	[]	[]	[]	[]	[]	[]
IN	AS	SD	SM	AL	CU	S	
[]	[]	[]	[]	[]	[]	[]	[]

HOME SPEED	STRESS	CRACK DATA (KEYWAY RADII) (IN)
SPEED (RPM)	(KSI)	
1- 1800	(KSI)	1- A-CR-OP (1800 RPM) (IN.)
2- 2160 (120X)	(KSI)	2- A-CR-OS (OVERSPEED) (IN.)

G. SERVICE DATA

1- OPER. TEMP.- METAL TEMP. HUB (DEG.F)
2- ESTIMATED MAX DA/DI (IN/HR)
3- ESTIMATED MAX DA/DI (IN/MONTH)

I. INSPECTION STATUS

1. FIRST INSPECTION DATE _____
2. OPERATING TIME AT INSPECTION (HR.) _____
3. KEYWAY CRACK DEPTH (MAX.) - (IN.) _____
4. DOE CRACK DEPTH (MAX.) - (IN.) _____
5. DIS. STATUS _____

[] INDICATES WESTINGHOUSE PROPRIETARY LEVELS B,C,E

DATE OF REPORT : 012281

ID # : 0280106202

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION		280		B. MATERIAL PROPERTIES (HUB)		C. MATERIAL PROPERTIES (RIM)	
1. BUILDING BLOCK	WATERFORD #1	1. TYPE	(MIN. Y.S. (KSI))	1. Y.S. (KSI)			
2. CUSTOMER:	LOUISIANA PUR. & LT. GEN	2. SUPPLIER:	UNITED STATES STEEL	2. U.T.S. (KSI)			
3. LOCATION	GEN	3. Y.S. (KSI)		3. ELONGATION			
4. DISC NO.	YN6354	4. U.T.S. (KSI)		4. R.A.			
5. ROTOR NO.		5. ELONGATION		5. FATT (DEG.F)			
6. S.O. NO.		6. R.A.		6. R.I. IMPACT (FT-LB.)			
		7. FATT (DEG.F)		7. U.S. IMPACT TEMP. (DEG.F)			
		8. R.I. IMPACT (FT-LB.)		8. U.S. IMPACT ENG. (FT-LB.)			
		9. U.S. IMPACT TEMP. (DEG.F)		9. U.S. KIC (KSI+SQRT(IN.))			
		10. U.S. IMPACT ENG. (FT-LB.)					
		11. U.S. KIC (KSI+SQRT(IN.))					

D. CHEMISTRY

1. C	2. MN	3. SI	4. P	5. CR	6. MO	7. V
8. NI	9. AS	10. SB	11. SN	12. AI	13. CH	14. S

E. BORE STRESS

SPEED (RPM)	SYSS	F. CRACK DATA (KEYWAY RADIUS (IN))
1. 1800	(KSI)	1. A-CR-OP (1800 RPM) (IN.)
2. 2160 (120X)	(KSI)	2. A-CR-OS (OVERSPEED) (IN.)

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F)	
2. ESTIMATED MAX DA/DI (IN/HR)	
3. ESTIMATED MAX DA/DI (IN/HOUR)	

H. INSPECTION STATUS

1. FIRST INSPECTION DATE	
2. OPERATING TIME AT INSPECTION (HR.)	
3. KEYWAY CRACK DEPTH (MAX.) (IN.)	
4. BORE CRACK DEPTH (MAX.) (IN.)	
5. DISK STATUS	

[] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B.C.E

DATE OF REPORT : 012281

ID # : 0290106202

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION		B. MATERIAL PROPERTIES (HUB)		C. MATERIAL PROPERTIES (RIM)	
1. BUILDING BLOCK	280	1. TYPE	(KSI)	1. V-S-	(KSI)
2. UNIT	WATERFORD #3	2. SUPPLIER	(KSI)	2. U-T-S-	(KSI)
3. CUSTOMER	LOUISIANA PUR. & LT.	3. V-S-	(KSI)	3. ELONGATION	
4. LPM	1	4. U-T-S-	(KSI)	4. R-A-	
5. LOCATION	GEN	5. ELONGATION		5. FATT (DEG.F)	
6. DISC	2	6. R-T-	(DEG.F)	6. R-T- IMPACT (FT-LB.)	
7. TEST NO.	1W6283	7. U-T-S-	(DEG.F)	7. U-T-S- IMPACT (FT-LB.)	
8. ROTOR NO.		8. U-S-	(DEG.F)	8. U-S- IMPACT ENG. (FT-LB.)	
9. S.D. NO.		9. U-S-	(KSI-SORT(IN.))	9. U-S- KIC (KSI-SORT(IN.))	
		10. U-S-	(KSI-SORT(IN.))		
		11. U-S-	(KSI-SORT(IN.))		

D. CHEMISTRY		E. CRACK DATA (KEYWAY RADIUS (IN.))	
1. NI	3	1. A-CR-OP (1800 RPM) (IN.)	
2. AS	3	2. A-CR-OS (OVERSPEED) (IN.)	
3. CR	3		
4. MO	3		
5. SI	3		
6. P	3		
7. SM	3		
8. CU	3		
9. S	3		
10. V	3		
11. CR	3		
12. NI	3		
13. AS	3		
14. CR	3		
15. MO	3		
16. SI	3		
17. P	3		
18. SM	3		
19. CU	3		
20. S	3		
21. V	3		
22. CR	3		
23. NI	3		
24. AS	3		
25. CR	3		
26. MO	3		
27. SI	3		
28. P	3		
29. SM	3		
30. CU	3		
31. S	3		
32. V	3		
33. CR	3		
34. NI	3		
35. AS	3		
36. CR	3		
37. MO	3		
38. SI	3		
39. P	3		
40. SM	3		
41. CU	3		
42. S	3		
43. V	3		
44. CR	3		
45. NI	3		
46. AS	3		
47. CR	3		
48. MO	3		
49. SI	3		
50. P	3		
51. SM	3		
52. CU	3		
53. S	3		
54. V	3		
55. CR	3		
56. NI	3		
57. AS	3		
58. CR	3		
59. MO	3		
60. SI	3		
61. P	3		
62. SM	3		
63. CU	3		
64. S	3		
65. V	3		
66. CR	3		
67. NI	3		
68. AS	3		
69. CR	3		
70. MO	3		
71. SI	3		
72. P	3		
73. SM	3		
74. CU	3		
75. S	3		
76. V	3		
77. CR	3		
78. NI	3		
79. AS	3		
80. CR	3		
81. MO	3		
82. SI	3		
83. P	3		
84. SM	3		
85. CU	3		
86. S	3		
87. V	3		
88. CR	3		
89. NI	3		
90. AS	3		
91. CR	3		
92. MO	3		
93. SI	3		
94. P	3		
95. SM	3		
96. CU	3		
97. S	3		
98. V	3		
99. CR	3		
100. NI	3		
101. AS	3		
102. CR	3		
103. MO	3		
104. SI	3		
105. P	3		
106. SM	3		
107. CU	3		
108. S	3		
109. V	3		
110. CR	3		
111. NI	3		
112. AS	3		
113. CR	3		
114. MO	3		
115. SI	3		
116. P	3		
117. SM	3		
118. CU	3		
119. S	3		
120. V	3		
121. CR	3		
122. NI	3		
123. AS	3		
124. CR	3		
125. MO	3		
126. SI	3		
127. P	3		
128. SM	3		
129. CU	3		
130. S	3		
131. V	3		
132. CR	3		
133. NI	3		
134. AS	3		
135. CR	3		
136. MO	3		
137. SI	3		
138. P	3		
139. SM	3		
140. CU	3		
141. S	3		
142. V	3		
143. CR	3		
144. NI	3		
145. AS	3		
146. CR	3		
147. MO	3		
148. SI	3		
149. P	3		
150. SM	3		
151. CU	3		
152. S	3		
153. V	3		
154. CR	3		
155. NI	3		
156. AS	3		
157. CR	3		
158. MO	3		
159. SI	3		
160. P	3		
161. SM	3		
162. CU	3		
163. S	3		
164. V	3		
165. CR	3		
166. NI	3		
167. AS	3		
168. CR	3		
169. MO	3		
170. SI	3		
171. P	3		
172. SM	3		
173. CU	3		
174. S	3		
175. V	3		
176. CR	3		
177. NI	3		
178. AS	3		
179. CR	3		
180. MO	3		
181. SI	3		
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183. SM	3		
184. CU	3		
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186. V	3		
187. CR	3		
188. NI	3		
189. AS	3		
190. CR	3		
191. MO	3		
192. SI	3		
193. P	3		
194. SM	3		
195. CU	3		
196. S	3		
197. V	3		
198. CR	3		
199. NI	3		
200. AS	3		
201. CR	3		
202. MO	3		
203. SI	3		
204. P	3		
205. SM	3		
206. CU	3		
207. S	3		
208. V	3		
209. CR	3		
210. NI	3		
211. AS	3		
212. CR	3		
213. MO	3		
214. SI	3		
215. P	3		
216. SM	3		
217. CU	3		
218. S	3		
219. V	3		
220. CR	3		
221. NI	3		
222. AS	3		
223. CR	3		
224. MO	3		
225. SI	3		
226. P	3		
227. SM	3		
228. CU	3		
229. S	3		
230. V	3		
231. CR	3		
232. NI	3		
233. AS	3		
234. CR	3		
235. MO	3		
236. SI	3		
237. P	3		
238. SM	3		
239. CU	3		
240. S	3		
241. V	3		
242. CR	3		
243. NI	3		
244. AS	3		
245. CR	3		
246. MO	3		
247. SI	3		
248. P	3		
249. SM	3		
250. CU	3		
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252. V	3		
253. CR	3		
254. NI	3		
255. AS	3		
256. CR	3		
257. MO	3		
258. SI	3		
259. P	3		
260. SM	3		
261. CU	3		
262. S	3		
263. V	3		
264. CR	3		
265. NI	3		
266. AS	3		
267. CR	3		
268. MO	3		
269. SI	3		
270. P	3		
271. SM	3		
272. CU	3		
273. S	3		
274. V	3		
275. CR	3		
276. NI	3		
277. AS	3		
278. CR	3		
279. MO	3		
280. SI	3		
281. P	3		
282. SM	3		
283. CU	3		
284. S	3		
285. V	3		
286. CR	3		
287. NI	3		
288. AS	3		
289. CR	3		
290. MO	3		
291. SI	3		
292. P	3		
293. SM	3		
294. CU	3		
295. S	3		
296. V	3		
297. CR	3		
298. NI	3		
299. AS	3		
300. CR	3		
301. MO	3		
302. SI	3		
303. P	3		
304. SM	3		
305. CU	3		
306. S	3		
307. V	3		
308. CR	3		
309. NI	3		
310. AS	3		
311. CR	3		
312. MO	3		
313. SI	3		
314. P	3		
315. SM	3		
316. CU	3		
317. S	3		
318. V	3		
319. CR	3		
320. NI	3		
321. AS	3		
322. CR	3		
323. MO	3		
324. SI	3		
325. P	3		
326. SM	3		
327. CU	3		
328. S	3		
329. V	3		
330. CR	3		
331. NI	3		
332. AS	3		
333. CR	3		
334. MO	3		
335. SI	3		
336. P	3		
337. SM	3		
338. CU	3		
339. S	3		
340. V	3		
341. CR	3		
342. NI	3		
343. AS	3		
344. CR	3		
345. MO	3		
346. SI	3		
347. P	3		
348. SM	3		
349. CU	3		
350. S	3		
351. V	3		
352. CR	3		
353. NI	3		
354. AS	3		
355. CR	3		
356. MO	3		
357. SI	3		
358. P	3		
359. SM	3		
360. CU	3		
361. S	3		
362. V	3		
363. CR	3		
364. NI	3		
365. AS	3		
366. CR	3		
367. MO	3		
368. SI	3		
369. P	3		
370. SM	3		
371. CU	3		
372. S	3		
373. V	3		
374. CR	3		
375. NI	3		
376. AS	3		
377. CR	3		
378. MO	3		
379. SI	3		
380. P	3		
381. SM	3		
382. CU	3		
383. S	3		
384. V	3		
385. CR	3		
386. NI	3		
387. AS	3		
388. CR	3		
389. MO	3		
390. SI	3		
391. P	3		
392. SM	3		
393. CU	3		
394. S	3		
395. V	3		
396. CR	3		
397. NI	3		
398. AS	3		
399. CR	3		
400. MO	3		
401. SI	3		
402. P	3		
403. SM	3		
404. CU	3		
405. S	3		
406. V	3		
407. CR	3		
408. NI	3		
409. AS	3		
410. CR	3		
411. MO	3		
412. SI	3		

[] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 012281

ID # : 0280106202

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 280
2. UNIT WATERFORD #3
3. CUSTOMER: LOUISIANA PWR. & LT.
4. LPM 1
5. LOCATION GEN
6. DISC 3
7. TEST NO. TN6335
8. ROTOR NO.
9. S.O. NO.

B. MATERIAL PROPERTIES (HUB)

1. TYPE TO
(MIN. Y.S. (KSI))
2. SUPPLIER: MIDVALE HERPENSTAL
3. Y.S. (KSI)
4. U.T.S. (KSI)
5. ELONGATION
6. R.A.
7. FATT (DEG.F)
8. R.T. IMPACT (FT.LB.)
9. U.S. IMPACT TEMP.
(DEG.F)
10. U.S. IMPACT ENG.
(FT.LB.)
11. U.S. KIC
(KSI*SQRT(IN.))

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI)
2. U.T.S. (KSI)
3. ELONGATION
4. R.A.
5. FATT (DEG.F)
6. R.T. IMPACT (FT.LB.)
7. U.S. IMPACT TEMP.
(DEG.F)
8. U.S. IMPACT ENG.
(FT.LB.)
9. U.S. KIC
(KSI*SQRT(IN.))

D. CHEMISTRY

C MN SI P CR MO V
[] [] [] [] [] [] []
NI AS SB SN AL CU S
[] [] [] [] [] [] []

E. BORE STRESS

SPEED (RPM) STRESS

1. 1800 (KSI) []
2. 2160 (120X) (KSI) []

F. CRACK DATA (KEYWAY RADIUS (IN) [])

1. A-CR-OP (1800 RPM) (IN.) []
2. A-CR-OS (OVERSPEED) (IN.) []

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F) []
2. ESTIMATED MAX DA/DT (IN/HR) []
3. ESTIMATED MAX DA/DT (IN/HOUR) []

I. INSPECTION STATUS

1. FIRST INSPECTION DATE []
2. OPERATING TIME AT INSPECTION (HR.) []
3. KEYWAY CRACK DEPTH (MAX.)-(IN.) []
4. BORE CRACK DEPTH (MAX.)-(IN.) []
5. DISK STATUS []

[] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 012281

ID # : 0280106202

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 280
2. UNIT WATERFORD #3
3. CUSTOMER: LOUISIANA PWR. & LT.
4. LPP 1
5. LOCATION GEN
6. DISC 4
7. TEST NO. TN6320
8. ROTOR NO.
9. S.O. NO.

B. MATERIAL PROPERTIES (HUB)

1. TYPE TC
(MIN. Y.S. [] (KSI))
2. SUPPLIER: BETHLEHEM STEEL
3. Y.S. (KSI) []
4. U.T.S. (KSI) []
5. ELONGATION []
6. R.A. []
7. FATT (DEG.F) []
8. R.T. IMPACT (FT.LB.) []
9. U.S. IMPACT TEMP. (DEG.F) []
10. U.S. IMPACT ENG. (FT.LB.) []
11. U.S. KIC (KSI*SQRT(IN.)) []

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI) []
2. U.T.S. (KSI) []
3. ELONGATION []
4. R.A. []
5. FATT (DEG.F) []
6. R.T. IMPACT (FT.LB.) []
7. U.S. IMPACT TEMP. (DEG.F) []
8. U.S. IMPACT ENG. (FT.LB.) []
9. U.S. KIC (KSI*SQRT(IN.)) []

D. CHEMISTRY

C [] MN [] SI [] P [] CR [] MO [] V []
NI [] AS [] SB [] SN [] AL [] CU [] S []

E. BORE STRESS

SPEED (RPM) STRESS
1. 1800 (KSI) []
2. 2160 (120X) (KSI) []

F. CRACK DATA (KEYWAY RADIUS (IN) [])

1. A-CR-OP (1800 RPM) (IN.) []
2. A-CR-OS (OVERSPEED) (IN.) []

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F) { }
2. ESTIMATED MAX DA/DT (IN/HR) { }
3. ESTIMATED MAX DA/DT (IN/MONTH) { }

I. INSPECTION STATUS

1. FIRST INSPECTION DATE { }
2. OPERATING TIME AT INSPECTION (HR.) { }
3. KEYWAY CRACK DEPTH (MAX.)-(IN.) { }
4. BORE CRACK DEPTH (MAX.)-(IN.) { }
5. DISK STATUS { }

[] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 012281

ID # : D280106202

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 280
2. UNIT WATERFORD B3
3. CUSTOMER: LOUISIANA PUR. & LT.
4. LPT 1
5. LOCATION GEN
6. DISC IN6598
7. TEST NO.
8. ROTOR NO.
9. S.O. NO.

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. [] (KSI)) TC
2. SUPPLIER: MIDVALE HEPPENSTALL
3. Y.S. (KSI)
4. U.T.S. (KSI)
5. ELONGATION
6. R.A.
7. FATT (DEG.F)
8. R.T. IMPACT (FT.LB.)
9. U.S. IMPACT TEMP. (DEG.F)
10. U.S. IMPACT ENG. (FT.LB.)
11. U.S. KIC (KSI*SQRT(IN.))

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI)
2. U.T.S. (KSI)
3. ELONGATION
4. R.A.
5. FATT (DEG.F)
6. R.T. IMPACT (FT.LB.)
7. U.S. IMPACT TEMP. (DEG.F)
8. U.S. IMPACT ENG. (FT.LB.)
9. U.S. KIC (KSI*SQRT(IN.))

D. CHEMISTRY

C [] MN [] SI [] P [] CR [] MO [] V []
NI [] AS [] SB [] SN [] AL [] CU [] S []

E. BORE STRESS

SPEED (RPM) STRESS
1. 1800 (KSI) []
2. 2100 (120X) (KSI) []

F. CRACK DATA (KEYWAY RADIUS (IN.) [])

1. A-CR-OP (1800 RPM) (IN.) []
2. A-CR-OS (OVERSPEED) (IN.) []

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F) []
2. ESTIMATED MAX DA/DT (IN/HR) []
3. ESTIMATED MAX DA/DT (IN/MONTH) []

I. INSPECTION STATUS

1. FIRST INSPECTION DATE []
2. OPERATING TIME AT INSPECTION (HR.) []
3. KEYWAY CRACK DEPTH (MAX.) (IN.) []
4. BORE CRACK DEPTH (MAX.) (IN.) []
5. DISC STATUS []

[] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 012281

ID # : 0280106203

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 280

2. UNIT WATERFORD #3

3. CUSTOMER: LOUISIANA PWR. & LT.

4. LPA 2

5. LOCATION GOV

6. DISC 1

7. TEST NO. TN6356

8. ROTOR NO.

9. S.O. NO.

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. [] (KSI))

2. SUPPLIER: UNITED STATES STEEL

3. Y.S. (KSI) []

4. U.T.S. (KSI) []

5. ELONGATION []

6. R.A. []

7. FATI (DEG.F) []

8. R-I. IMPACT (FT.LB.) []

9. U.S. IMPACT TEMP. (DEG.F) []

10. U.S. IMPACT ENG. (FT.LB.) []

11. U.S. KIC (KSI*SQRT(IN.)) []

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI) []

2. U.T.S. (KSI) []

3. ELONGATION []

4. R.A. []

5. FATI (DEG.F) []

6. R-I. IMPACT (FT.LB.) []

7. U.S. IMPACT TEMP. (DEG.F) []

8. U.S. IMPACT ENG. (FT.LB.) []

9. U.S. KIC (KSI*SQRT(IN.)) []

D. CHEMISTRY

C [] MN [] SI [] P [] CR [] MO [] V []
NI [] AS [] SO [] SN [] AL [] CU [] S []

E. BORE STRESS

SPEED (RPM) STRESS

1. 1800 (KSI) []

2. 2160 (120X) (KSI) []

F. CRACK DATA (KEYWAY RADIUS (IN.) [])

1. A-CR-OP (1800 RPM) (IN.) []

2. A-CR-OS (OVERSPEED) (IN.) []

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F) []

2. ESTIMATED MAX DA/DT (IN/HR) []

3. ESTIMATED MAX DA/DT (IN/MONTH) []

I. INSPECTION STATUS

1. FIRST INSPECTION DATE []

2. OPERATING TIME AT INSPECTION (HR.) []

3. KEYWAY CRACK DEPTH (MAX.)-(IN.) []

4. BORE CRACK DEPTH (MAX.)-(IN.) []

5. DISK STATUS []

[] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 012281

ID # : D280106203

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 280
2. UNIT WATERFORD #3
3. CUSTOMER: LOUISIANA PWR. & LT.
4. LPA 2
5. LOCATION GOV
6. DISC# 2
7. TEST NO. TN6285
8. ROTOR NO.
9. S.O. NO.

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. [] (KSI))
2. SUPPLIER: MIDVALE HEPPESTALL
3. Y.S. (KSI)
4. U.T.S. (KSI)
5. ELONGATION
6. R.A.
7. FATT (DEG.F)
8. R.T. IMPACT (FT.LB.)
9. U.S. IMPACT TEMP. (DEG.F)
10. U.S. IMPACT ENG. (FT.LB.)
11. U.S. KIC (KSI*SQRT(IN.))

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI)
2. U.T.S. (KSI)
3. ELONGATION
4. R.A.
5. FATT (DEG.F)
6. R.T. IMPACT (FT.LB.)
7. U.S. IMPACT TEMP. (DEG.F)
8. U.S. IMPACT ENG. (FT.LB.)
9. U.S. KIC (KSI*SQRT(IN.))

D. CHEMISTRY

C, MN, SI, P, CR, MO, V
NI, AS, SB, SH, AL, CU, S

E. ROTOR STRESS

SPEED (RPM) STRESS
1. 1800 (KSI)
2. 2160 (120X) (KSI)

F. CRACK DATA (KEYWAY RADII) (IN.)

1. A-CR-OP (1800 RPM) (IN.)
2. A-CR-OS (OVERSPEED) (IN.)

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F)
2. ESTIMATED MAX DA/DT (IN/HR)
3. ESTIMATED MAX DA/DI (IN/MONTH)

H. INSPECTION STATUS

1. FIRST INSPECTION DATE
2. OPERATING TIME AT INSPECTION (HR.)
3. KEYWAY CRACK DEPTH (MAX.)-(IN.)
4. BORE CRACK DEPTH (MAX.)-(IN.)
5. RISK STATUS

[] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 012281

ID # : D280106203

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 280

2. UNIT WATERFORD #3

3. CUSTOMER: LOUISIANA PWR. & LT.

4. LP# 2

5. LOCATION GOV

6. DISC# 3

7. TEST NO. TN6349

8. ROTOR NO.

9. S.O. NO.

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. (KSI))

2. SUPPLIER: MIDVALE HEPPENSTALL

3. Y.S. (KSI)

4. U.T.S. (KSI)

5. ELONGATION

6. R.A.

7. FATT (DEG.F)

8. R.T. IMPACT (FT.LB.)

9. U.S. IMPACT TEMP. (DEG.F)

10. U.S. IMPACT ENG. (FT.LB.)

11. U.S. KIC (KSI*SQRT(IN.))

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI)

2. U.T.S. (KSI)

3. ELONGATION

4. R.A.

5. FATT (DEG.F)

6. R.T. IMPACT (FT.LB.)

7. U.S. IMPACT TEMP. (DEG.F)

8. U.S. IMPACT ENG. (FT.LB.)

9. U.S. KIC (KSI*SQRT(IN.))

D. CHEMISTRY

C MN SI P CR MO V
[] [] [] [] [] [] []
NI AS SB SM AL CU S
[] [] [] [] [] [] []

E. BORE STRESS

SPEED (RPM) STRESS

1. 1800 (KSI)

2. 2160 (120X) (KSI)

F. CRACK DATA (KEYWAY RADIUS (IN))

1. A-CR-OP (1800 RPM) (IN.)

2. A-CR-OS (OVERSPEED) (IN.)

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F)

2. ESTIMATED MAX DA/DT (IN/HR)

3. ESTIMATED MAX DA/DT (IN/HOMIN)

I. INSPECTION STATUS

1. FIRST INSPECTION DATE

2. OPERATING TIME AT INSPECTION (HR.)

3. KEYWAY CRACK DEPTH (MAX.) (IN.)

4. BORE CRACK DEPTH (MAX.) (IN.)

5. DISK STATUS

[] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 012281

ID # : 0280106203

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 280
2. UNIT WATERFORD #3
3. CUSTOMER: LOUISIANA PUR. & LT.
4. LP# 2
5. LOCATION GOV
6. DISC# 4
7. TEST NO. TN6322
8. ROTOR NO.
9. S.O. NO.

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. (KSI)) TC
2. SUPPLIER: BETHLEHEM STEEL
3. Y.S. (KSI)
4. U.T.S. (KSI)
5. ELONGATION
6. R.A.
7. FATT (DEG.F)
8. R-T. IMPACT (FT.LB.)
9. U.S. IMPACT TEMP. (DEG.F)
10. U.S. IMPACT ENG. (FT.LB.)
11. U.S. KIC (KSI*SQRT(IN.))

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI)
2. U.T.S. (KSI)
3. ELONGATION
4. R.A.
5. FATT (DEG.F)
6. R-T. IMPACT (FT.LB.)
7. U.S. IMPACT TEMP. (DEG.F)
8. U.S. IMPACT ENG. (FT.LB.)
9. U.S. KIC (KSI*SQRT(IN.))

D. CHEMISTRY

C [] MN [] SI [] P [] CR [] MO [] V []
NI [] AS [] SB [] SM [] AL [] CU [] S []

E. BORE STRESS

SPEED (RPM) STRESS
1. 1800 (KSI) []
2. 2100 (120X) (KSI) []

F. CRACK DATA (KEYWAY RADIUS (IN) [])

1. A-CR-OP (1800 RPM) (IN.) []
2. A-CR-OS (OVERSPEED) (IN.) []

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F) []
2. ESTIMATED MAX DA/DI (IN/HR) []
3. ESTIMATED MAX DA/DI (IN/MONTH) []

I. INSPECTION STATUS

1. FIRST INSPECTION DATE []
2. OPERATING TIME AT INSPECTION (HR.) []
3. KEYWAY CRACK DEPTH (MAX.)-(IN.) []
4. BORE CRACK DEPTH (MAX.)-(IN.) []
5. DISK STATUS []

[] INDICATES WESTINGHOUSE PROPRIETARY LEVELS B,C,E

DATE OF REPORT : 012281

ID # : 0280106203

LP TURBINE DISC INFORMATION

C. MATERIAL PROPERTIES (RIM)

B. MATERIAL PROPERTIES (HUB)

A. UNIT IDENTIFICATION

1. BUILDING BLOCK	220	1. TYPE	(KSI)	IC
2. UNIT	WATERFORD HT	2. SUPPLIER	(KSI)	
3. CUSTOMER	LOUISIANA PUR. & LY.	3. Y-S. (KSI)		1. Y-S. (KSI)
4. LP#	2	4. U-T-S. (KSI)		2. U-T-S. (KSI)
5. LOCATION	60V	5. ELONGATION		3. ELONGATION
6. DISC#	5	6. R-A		4. R-A
7. TEST NO.	IN6342	7. FATI (DEG.F)		5. FATI (DEG.F)
8. ROTOR NO.		8. R-T. IMPACT (FT-LB.)		6. R-T. IMPACT (FT-LB.)
9. S.O. NO.		9. U.S. IMPACT (DEG.F)		7. U.S. IMPACT (DEG.F)
		10. U-S. IMPACT ENG. (FT-LB.)		8. U-S. IMPACT ENG. (FT-LB.)
		11. U.S. KIC (KSI-SQRT(IN.))		9. U.S. KIC (KSI-SQRT(IN.))

D. CHEMISTRY

C	SI	P	CR	MO	V
[]	[]	[]	[]	[]	[]
NI	AS	SH	AL	CU	S
[]	[]	[]	[]	[]	[]

F. BORE STRESS

SPEED (RPM)	STRESS
1. 1800	(KSI)
2. 2160 (120%)	(KSI)

F. CRACK DATA (KEYWAY RADII) (IN.)

1. A-CR-OP (1800 RPM) (IN.)	[]
2. A-CR-OS (OVERSPEED) (IN.)	[]

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F)	[]
2. ESTIMATED MAX OA/DI (IN/IN)	[]
3. ESTIMATED MAX DA/DI (IN/MONTH)	[]

I. INSPECTION STATUS

1. FIRST INSPECTION DATE	[]
2. OPERATING TIME AT INSPECTION (HR.)	[]
3. KEYWAY CRACK DEPTH (MAX.) (IN.)	[]
4. BORE CRACK DEPTH (MAX.) (IN.)	[]
5. DISK STATUS	[]

[] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 012281

ID # : 0280106204

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 280
2. UNIT WATERFORD #3
3. CUSTOMER: LOUISIANA PWR. & LT.
4. LP# 2
5. LOCATION GEN
6. DISC# 1
7. TEST NO. TN6355
8. ROTOR NO.
9. S.O. NO.

B. MATERIAL PROPERTIES (HUB)

1. TYPE MIN. Y.S. [] (KSI)
2. SUPPLIER: UNITED STATES STEEL
3. Y.S. (KSI)
4. U.T.S. (KSI)
5. ELONGATION
6. R.A.
7. FATT (DEG.F)
8. R.T. IMPACT (FT.LB.)
9. U.S. IMPACT TEMP. (DEG.F)
10. U.S. IMPACT ENG. (FT.LB.)
11. U.S. KIC (KSI*SQRT(IN.))

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI)
2. U.T.S. (KSI)
3. ELONGATION
4. R.A.
5. FATT (DEG.F)
6. R.T. IMPACT (FT.LB.)
7. U.S. IMPACT TEMP. (DEG.F)
8. U.S. IMPACT ENG. (FT.LB.)
9. U.S. KIC (KSI*SQRT(IN.))

D. CHEMISTRY

C MN SI P CR MO V
NI AS SB SN AL CU S

E. BORE STRESS

SPEED (RPM) STRESS

1. 1800 (KSI)
2. 2160 (120X) (KSI)

F. CRACK DATA (KEYWAY RADIUS (IN))

1. A-CR-OP (1800 RPM) (IN.)
2. A-CR-OS (OVERSPEED) (IN.)

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F)
2. ESTIMATED MAX DA/DT (IN/HR)
3. ESTIMATED MAX DA/DT (IN/MONTH)

I. INSPECTION STATUS

1. FIRST INSPECTION DATE
2. OPERATING TIME AT INSPECTION (HR.)
3. KEYWAY CRACK DEPTH (MAX.)-(IN.)
4. BORE CRACK DEPTH (MAX.)-(IN.)
5. DISK STATUS

[] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 012281

ID # : D280106204

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 280
2. UNIT WATERFORD #3
3. CUSTOMER: LOUISIANA PWR. & LT.
4. LPT 2
5. LOCATION 6EN
6. DISC# 2
7. TEST NO. IN0343
8. ROTOR NO.
9. S.O. NO.

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. [] (KSI))
2. SUPPLIER: MIDVALE HERPENSTALL
3. Y.S. (KSI) []
4. U.T.S. (KSI) []
5. ELONGATION []
6. R.A. []
7. FATT (DEG.F) []
8. R.T. IMPACT (FT.LB.) []
9. U.S. IMPACT TEMP. (DEG.F) []
10. U.S. IMPACT ENG. (FT.LB.) []
11. U.S. KIC (KSI*SQRT(IN.)) []

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI) []
2. U.T.S. (KSI) []
3. ELONGATION []
4. R.A. []
5. FATT (DEG.F) []
6. R.T. IMPACT (FT.LB.) []
7. U.S. IMPACT TEMP. (DEG.F) []
8. U.S. IMPACT ENG. (FT.LB.) []
9. U.S. KIC (KSI*SQRT(IN.)) []

D. CHEMISTRY

C [] MN [] SI [] P [] CR [] MO [] V []
NI [] AS [] SO [] SM [] AL [] CU [] S []

E. BORE STRESS

SPEED (RPM) STRESS

1. 1800 (KSI) []
2. 2160 (120X) (KSI) []

F. CRACK DATA (KEYWAY RADIUS (IN)) []

1. A-CR-OP (1800 RPM) (IN.) []
2. A-CR-OS (OVERSPEED) (IN.) []

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F) []
2. ESTIMATED MAX DA/DT (IN/HR) []
3. ESTIMATED MAX DA/DT (IN/MONTH) []

I. INSPECTION STATUS

1. FIRST INSPECTION DATE []
2. OPERATING TIME AT INSPECTION (HR.) []
3. KEYWAY CRACK DEPTH (MAX.) (IN.) []
4. BORE CRACK DEPTH (MAX.) (IN.) []
5. DISK STATUS []

[] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 012281

ID # : D280106204

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 280
2. UNIT WATERFORD #3
3. CUSTOMER: LOUISIANA PWR. & LT.
4. LPM 2
5. LOCATION GEN
6. DISC IN6344
7. TEST NO.
8. ROTOR NO.
9. S.O. NO.

B. MATERIAL PROPERTIES (HUB)

1. TYPE TO
(MIN. Y.S. [] (KSI))
2. SUPPLIER: MIDVALE HEPPESTALL
3. Y.S. (KSI)
4. U.T.S. (KSI)
5. ELONGATION
6. R.A.
7. FATT (DEG.F)
8. R.T. IMPACT (FT.LB.)
9. U.S. IMPACT TEMP.
(DEG.F)
10. U.S. IMPACT ENG. (FT.LB.) 69.5
11. U.S. KIC 192.963
(KSI*SQRT(IN.))

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI)
2. U.T.S. (KSI)
3. ELONGATION
4. R.A.
5. FATT (DEG.F)
6. R.T. IMPACT (FT.LB.)
7. U.S. IMPACT TEMP.
(DEG.F)
8. U.S. IMPACT ENG. (FT.LB.)
9. U.S. KIC
(KSI*SQRT(IN.))

D. CHEMISTRY

C [] MN [] ST [] P [] CR [] MO [] V []
NI [] AS [] SB [] SN [] AL [] CU [] S []

E. BORE STRESS

SPEED (RPM) STRESS
1. 1800 (KSI) []
2. 2160 (120X) (KSI) []

F. CRACK DATA (KEYWAY RADII) (IN.) []

1. A-CR-OP (1800 RPM) (IN.) []
2. A-CR-OS (OVERSPEED) (IN.) []

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F) []
2. ESTIMATED MAX DA/DI (IN/HR) []
3. ESTIMATED MAX DA/DI (IN/MONTH) []

I. INSPECTION STATUS

1. FIRST INSPECTION DATE []
2. OPERATING TIME AT INSPECTION (HR.) []
3. KEYWAY CRACK DEPTH (MAX.)-(IN.) []
4. BORE CRACK DEPTH (MAX.)-(IN.) []
5. DISK STATUS []

[] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 012281

ID # : 0280106204

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 280
2. UNIT WATERFORD #3
3. CUSTOMER: LOUISIANA PWR. & LT.
4. LPR 2
5. LOCATION GEN
6. DISC # 4
7. TEST NO. IN6323
8. ROTOR NO.
9. S.O. NO.

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. [] (KSI)) TC
2. SUPPLIER: BETHLEHEM STEEL
3. Y.S. (KSI)
4. U.T.S. (KSI)
5. ELONGATION
6. R.A.
7. FATT (DEG.F)
8. R.T. IMPACT (FT.LB.)
9. U.S. IMPACT TEMP. (DEG.F)
10. U.S. IMPACT ENG. (FT.LB.)
11. U.S. KIC (KSI*SQRT(IN.))

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI)
2. U.T.S. (KSI)
3. ELONGATION
4. R.A.
5. FATT (DEG.F)
6. R.T. IMPACT (FT.LB.)
7. U.S. IMPACT TEMP. (DEG.F)
8. U.S. IMPACT ENG. (FT.LB.)
9. U.S. KIC (KSI*SQRT(IN.))

D. CHEMISTRY

C [] MH [] SI [] P [] CR [] MO [] V []
NI [] AS [] SH [] SM [] AL [] CU [] S []

E. BORE STRESS

SPEED (RPM) STRESS

1. 1800 (KSI) []
2. 2160 (120X) (KSI) []

F. CRACK DATA (KEYWAY RADIUS (IN)) []

A-CR-OP (1800 RPM) (IN.) []
A-CR-OS (OVERSPEED) (IN.) []

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F) []
2. ESTIMATED MAX DA/DT (IN/HR) []
3. ESTIMATED MAX DA/DT (IN/MONTH) []

I. INSPECTION STATUS

1. FIRST INSPECTION DATE []
2. OPERATING TIME AT INSPECTION (HR.) []
3. KEYWAY CRACK DEPTH (MAX.)-(IN.) []
4. BORE CRACK DEPTH (MAX.)-(IN.) []
5. DISK STATUS []

DATE OF REPORT = 012281

ID #: 0280106205

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION		B. MATERIAL PROPERTIES (HUB)		C. MATERIAL PROPERTIES (RIM)	
1. BUILDING BLOCK	280	1. TYPE	2. SUPPLY	1. TYPE	2. SUPPLY
2. UNIT	WATERFORD #1	1. MIN. Y-S.	2. UNITED STATES STEEL	1. MIN. Y-S.	2. UNITED STATES STEEL
3. CUSTOMER:	LOUISIANA	3. Y-S. (KSI)		3. Y-S. (KSI)	
4. LPA	3	4. U-T-S. (KSI)		4. U-T-S. (KSI)	
5. LOCATION	SOV	5. ELONGATION		5. ELONGATION	
6. DISC	1	6. R.A.		6. R.A.	
7. TEST NO.	IM6353	7. FATI (DEG.)		7. FATI (DEG.)	
8. ROTOR NO.		8. R-I. IMPACT (T-LB.)		8. R-I. IMPACT (T-LB.)	
9. S.O. NO.		9. U.S. IMPACT TEMP. (DEG.)		9. U.S. IMPACT TEMP. (DEG.)	
		10. U-S. IMPACT ENG. (T-LB.)		10. U-S. IMPACT ENG. (T-LB.)	
		11. U.S. KIC (KSI) (SORTING)		11. U.S. KIC (KSI) (SORTING)	

D. CHEMISTRY

E. HORE STRESS		F. CHACK DATA (KEYWAY RADII) (IN.)	
SPEED (RPM)	STRESS		
1. 1800	(KSI)	1. A-CR-OP (1800 RPM)	(IN.)
2. 2160	(KSI)	2. A-CR-OS (OVERSPEED)	(IN.)

6. SERVICE DATA

1- OPER. TEMP.- METAL TEMP. HUB (DEG.F)
2- ESTIMATED MAX O.A/DI (IN/HR)
3- ESTIMATED MAX D.A/DI (IN/MONTH)

I. INSPECTION STATUS

1- FIRST INSPECTION DATE
2- OPERATING TIME AT INSPECTION (HR.)
3- KEYWAY CRACK DEPTH (MAX.)-(IN.)
4- BORE CRACK DEPTH (MAX.)-(IN.)
5- DISK STATUS

[] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 012281

ID # : 0280106205

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 280
2. UNIT WATERFORD #3
3. CUSTOMER: LOUISIANA PWR. & LT.
4. LPH 3
5. LOCATION GOV
6. DISC# 2
7. TEST NO. TN6350
8. ROTOR NO.
9. S.O. NO.

B. MATERIAL PROPERTIES (HUB)

1. TYPE T
2. SUPPLIER: MIDVALE HEPPENSTALL
3. Y.S. (KSI) []
4. U.T.S. (KSI) []
5. ELONGATION []
6. R.A. []
7. FATT (DEG.F) []
8. R.T. IMPACT (FT.LB.) []
9. U.S. IMPACT TEMP. (DEG.F) []
10. U.S. IMPACT ENG. (FT.LB.) []
11. U.S. KIC (KSI*SQRT(IN.)) []

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI) []
2. U.T.S. (KSI) []
3. ELONGATION []
4. R.A. []
5. FATT (DEG.F) []
6. R.T. IMPACT (FT.LB.) []
7. U.S. IMPACT TEMP. (DEG.F) []
8. U.S. IMPACT ENG. (FT.LB.) []
9. U.S. KIC (KSI*SQRT(IN.)) []

D. CHEMISTRY

C [] MN [] SI [] P [] CR [] MO [] V []
NI [] AS [] SB [] SN [] AL [] CU [] S []

E. BORE STRESS

SPEED (RPM) STRESS
1. 1800 (KSI) []
2. 2160 (120X) (KSI) []

F. CRACK DATA (KEYWAY RADIUS (IN)) []

1. A-CR-OP (1800 RPM) (IN.) []
2. A-CR-OS (OVERSPEED) (IN.) []

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F) []
2. ESTIMATED MAX DA/DT (IN/HR) []
3. ESTIMATED MAX DA/DT (IN/MONTH) []

I. INSPECTION STATUS

1. FIRST INSPECTION DATE []
2. OPERATING TIME AT INSPECTION (HR.) []
3. KEYWAY CRACK DEPTH (MAX.) (IN.) []
4. BORE CRACK DEPTH (MAX.) (IN.) []
5. DISK STATUS []

[] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 012281

ID # : 0280106205

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 280
2. UNIT WATERFORD #3
3. CUSTOMER: LOUISIANA PUR. & LT.
4. LP# 3
5. LOCATION GOV
6. DISC 3
7. TEST NO. TN6349
8. ROTOR NO.
9. S.O. NO.

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. [] (KSI)) TO
2. SUPPLIER: MIDVALE HEPENSTALL
3. Y.S. (KSI) []
4. U.T.S. (KSI) []
5. ELONGATION []
6. R.A. []
7. FATT (DEG.F) []
8. R.T. IMPACT (FT.LB.) []
9. U.S. IMPACT TEMP. (DEG.F) []
10. U.S. IMPACT ENG. (FT.LB.) []
11. U.S. KIC []
[KSI=SQRT(IN.)]

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI) []
2. U.T.S. (KSI) []
3. ELONGATION []
4. R.A. []
5. FATT (DEG.F) []
6. R.T. IMPACT (FT.LB.) []
7. U.S. IMPACT TEMP. (DEG.F) []
8. U.S. IMPACT ENG. (FT.LB.) []
9. U.S. KIC []
[KSI=SQRT(IN.)]

D. CHEMISTRY

C [] MN [] SI [] P [] CR [] MO [] V []
NI [] AS [] SB [] SM [] AL [] CU [] S []

E. BORE STRESS

SPEED (RPM) STRESS

1. 1800 (KSI) []
2. 2160 (120%) (KSI) []

F. CRACK DATA (KEYWAY RADIUS (IN.) [])

1. A-CR-OP (1800 RPM) (IN.) []
2. A-CR-OS (OVERSPEED) (IN.) []

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F) []
2. ESTIMATED MAX DA/DT (IN/HR) []
3. ESTIMATED MAX DA/DT (IN/MONTH) []

H. INSPECTION STATUS

1. FIRST INSPECTION DATE []
2. OPERATING TIME AT INSPECTION (HR.) []
3. KEYWAY CRACK DEPTH (MAX.) (IN.) []
4. BORE CRACK DEPTH (MAX.) (IN.) []
5. DISK STATUS []

[] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 012281

ID # : D280106205

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 280
2. UNIT WATERFORD #3
3. CUSTOMER: LOUISIANA PWR. & LT.
4. LPH 3
5. LOCATION GOV
6. DISC #
7. TEST NO. IN6325
8. ROTOR NO.
9. S.O. NO.

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. [] (KSI)) TC
2. SUPPLIER: BETHLEHEM STEEL
3. Y.S. (KSI)
4. U.T.S. (KSI)
5. ELONGATION
6. R.A.
7. FATT (DEG.F)
8. R.T. IMPACT (FT.LB.)
9. U.S. IMPACT TEMP. (DEG.F)
10. U.S. IMPACT ENG. (FT.LB.)
11. U.S. KIC (KSI*SQRT(IN.))

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI)
2. U.T.S. (KSI)
3. ELONGATION
4. R.A.
5. FATT (DEG.F)
6. R.T. IMPACT (FT.LB.)
7. U.S. IMPACT TEMP. (DEG.F)
8. U.S. IMPACT ENG. (FT.LB.)
9. U.S. KIC (KSI*SQRT(IN.))

D. CHEMISTRY

C MH SI P CR MN V
[] [] [] [] [] [] []
NI AS SB SH AL CU S
[] [] [] [] [] [] []

E. BORE STRESS

SPEED (RPM) STRESS
1. 1800 (KSI) []
2. 2160 (120X) (KSI) []

F. CRACK DATA (KEYWAY RADIUS (IN) [])

1. A-CR-OP (1800 RPM) (IN.) []
2. A-CR-OS (OVERSPEED) (IN.) []

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F) []
2. ESTIMATED MAX DA/DT (IN/HR) []
3. ESTIMATED MAX DA/DT (IN/MONTH) []

I. INSPECTION STATUS

1. FIRST INSPECTION DATE []
2. OPERATING TIME AT INSPECTION (HR.) []
3. KEYWAY CRACK DEPTH (MAX.)-(IN.) []
4. BORE CRACK DEPTH (MAX.)-(IN.) []
5. DISK STATUS []

[] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 012281

ID # : 0280106205

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 280
2. UNIT WATERFORD #3
3. CUSTOMER: LOUISIANA PWR. & LT.
4. LP# 3
5. LOCATION GOV
6. DISC# 5
7. TEST NO. TH6348
8. ROTOR NO.
9. S.O. NO.

B. MATERIAL PROPERTIES (HUB)

1. TYPE TC
(MIN. Y.S. [] (KSI))
2. SUPPLIER: MIDVALE HERPENSTALL
3. Y.S. (KSI)
4. U.T.S. (KSI)
5. ELONGATION
6. R.A.
7. FATT (DEG.F)
8. H.T. IMPACT (FT.LB.)
9. U.S. IMPACT TEMP.
(DEG.F)
10. U.S. IMPACT ENG.
(FT.LB.)
11. U.S. KIC
(KSI*SQRT(IN.))

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI)
2. U.T.S. (KSI)
3. ELONGATION
4. R.A.
5. FATT (DEG.F)
6. H.T. IMPACT (FT.LB.)
7. U.S. IMPACT TEMP.
(DEG.F)
8. U.S. IMPACT ENG.
(FT.LB.)
9. U.S. KIC
(KSI*SQRT(IN.))

D. CHEMISTRY

C [] MN [] SI [] P [] CR [] MO [] V []
NI [] AS [] SB [] SN [] AL [] CU [] S []

E. BORE STRESS

SPEED (RPM) STRESS

1. 1800 (KSI) {
2. 2160 (120X) (KSI) {

F. CRACK DATA (KEYWAY RADIUS (IN) [])

1. A-CR-OP (1800 RPM) (IN.) {
2. A-CR-OS (OVERSPEED) (IN.) {

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F) {
2. ESTIMATED MAX DA/DT (IN/HR) {
3. ESTIMATED MAX DA/DT (IN/MONTH) {

I. INSPECTION STATUS

1. FIRST INSPECTION DATE {
2. OPERATING TIME AT INSPECTION (HR.) {
3. KEYWAY CRACK DEPTH (MAX.)-(IN.) {
4. BORE CRACK DEPTH (MAX.)-(IN.) {
5. DISK STATUS {

[] INDICATES WESTINGHOUSE PROPRIETARY LEVELS B,C,E

DATE OF REPORT : 012281

ID # : 0280106206

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION		B. MATERIAL PROPERTIES (HUB)		C. MATERIAL PROPERTIES (RIM)	
1. BUILDING BLOCK	280	1. TYPE (MIN. Y.S. (KSI))	1. Y.S. (KSI)	1. Y.S. (KSI)	
2. UNIT WATERFORD #1		2. SUPPLIER: UNITED STATES STEEL	2. U.T.S. (KSI)	2. U.T.S. (KSI)	
3. CUSTOMER: LOUISIANA PUR. & LT.		3. Y.S. (KSI)	3. ELONGATION	3. ELONGATION	
4. LPA# 3		4. U.T.S. (KSI)		4. R.A.	
5. LOCATION GEN		5. ELONGATION		5. FAT (DEG.F)	
6. DISC# TN6358		6. R.A.		6. R.T. IMPACT (FT.LB.)	
7. TEST NO.		7. FAT (DEG.F)		7. U.S. IMPACT TEMP. (DEG.F)	
8. ROTOR NO.		8. R.T. IMPACT (FT.LB.)		8. U.S. IMPACT ENG. (FT.LB.)	
9. S.O. NO.		9. U.S. IMPACT TEMP. (DEG.F)		9. U.S. KIC (KSI*SQRT(IN.))	
		10. U.S. IMPACT ENG. (FT.LB.)			
		11. U.S. KIC (KSI*SQRT(IN.))			

D. CHEMISTRY		SI	P	CR	MO	V
[]	[]	[]	[]	[]	[]	[]
NI	AS	SR	SN	AL	CU	S
[]	[]	[]	[]	[]	[]	[]

E. BORE STRESS		F. CRACK DATA (KEYWAY RADIUS (IN))	
SPEED (RPM)	STRESS (KSI)	1. A-CR-OP (1800 RPM) (IN.)	
1. 1800	[]	2. A-CR-OS (OVERSPEED) (IN.)	
2. 2160 (120X)	[]		

G. SERVICE DATA	
1. OPER. TEMP. METAL TEMP. HUB (DEG.F)	[]
2. ESTIMATED MAX OA/DI (IN/MONTH)	[]
3. ESTIMATED MAX OA/DI (IN/MONTH)	[]

I. INSPECTION STATUS	
1. FIRST INSPECTION DATE	[]
2. OPERATING TIME AT INSPECTION (HR.)	[]
3. KEYWAY CRACK DEPTH (MAX.) (IN.)	[]
4. BORE CRACK DEPTH (MAX.) (IN.)	[]
5. DISC STATUS	[]

[] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 012281

ID # : 0280106206

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 280
2. UNIT WATERFORD #3
3. CUSTOMER: LOUISIANA PUR. & LT.
4. LPM 3
5. LOCATION GEN
6. DISC 2
7. TEST NO. TN6287
8. ROTOR NO.
9. S.O. NO.

B. MATERIAL PROPERTIES (HUB)

1. TYPE TF
(MIN. Y.S. (KSI))
2. SUPPLIER: MIDVALE HEPPENSTALL
3. Y.S. (KSI)
4. U.T.S. (KSI)
5. ELONGATION
6. R.A.
7. FATT (DEG.F)
8. R.T. IMPACT (FT.LB.)
9. U.S. IMPACT TEMP. (DEG.F)
10. U.S. IMPACT ENG. (FT.LB.)
11. U.S. KIC (KSI*SQRT(IN.))

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI)
2. U.T.S. (KSI)
3. ELONGATION
4. R.A.
5. FATT (DEG.F)
6. R.T. IMPACT (FT.LB.)
7. U.S. IMPACT TEMP. (DEG.F)
8. U.S. IMPACT ENG. (FT.LB.)
9. U.S. KIC (KSI*SQRT(IN.))

D. CHEMISTRY

C [] MN [] SI [] P [] CR [] MO [] V []
NI [] AS [] SB [] SM [] AL [] CU [] S []

E. BORE STRESS

SPEED (RPM) STRESS

1. 1800 (KSI) []
2. 2100 (420%) (KSI) []

F. CRACK DATA (KEYWAY RADIUS (IN.) [])

1. A-CR-OP (1800 RPM) (IN.) []
2. A-CR-OS (OVERSPEED) (IN.) []

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F) { }
2. ESTIMATED MAX DA/DT (IN/HR) { }
3. ESTIMATED MAX DA/DT (IN/MONTH) { }

I. INSPECTION STATUS

1. FIRST INSPECTION DATE { }
2. OPERATING TIME AT INSPECTION (HR.) { }
3. KEYWAY CRACK DEPTH (MAX.)-(IN.) { }
4. BORE CRACK DEPTH (MAX.)-(IN.) { }
5. DISK STATUS { }

E) INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 012281

ID # : 0280106206

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 280
2. UNIT WATERFORD #3
3. CUSTOMER: LOUISIANA PWR. & LT.
4. LP# 3
5. LOCATION GEN
6. DISC IN6347
7. TEST NO.
8. ROTOR NO.
9. S.O. NO.

B. MATERIAL PROPERTIES (HUB)

1. TYPE (MIN. Y.S. () (KSI)) TD
2. SUPPLIER: MIDVALE HEPPENSTALL
3. Y.S. (KSI)
4. U.T.S. (KSI)
5. ELONGATION
6. R.A.
7. FATT (DEG.F)
8. R.T. IMPACT (FT.LB.)
9. U.S. IMPACT TEMP. (DEG.F)
10. U.S. IMPACT ENG. (FT.LB.)
11. U.S. KIC (KSI*SQRT(IN.))

C. MATERIAL PROPERTIES (RIM)

1. Y.S. (KSI)
2. U.T.S. (KSI)
3. ELONGATION
4. R.A.
5. FATT (DEG.F)
6. R.T. IMPACT (FT.LB.)
7. U.S. IMPACT TEMP. (DEG.F)
8. U.S. IMPACT ENG. (FT.LB.)
9. U.S. KIC (KSI*SQRT(IN.))

D. CHEMISTRY

C MN SI P CR MO V
NI AS SB SN AL CU S

E. BORE STRESS

SPEED (RPM) STRESS

1. 1800 (KSI) []
2. 2160 (120X) (KSI) []

F. CRACK DATA (KEYWAY RADIUS (IN) [])

1. A-CR-OP (1800 RPM) (IN.) []
2. A-CR-OS (OVERSPEED) (IN.) []

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F) []
2. ESTIMATED MAX DA/DT (IN/HR) []
3. ESTIMATED MAX DA/DT (IN/MONTH) []

I. INSPECTION STATUS

1. FIRST INSPECTION DATE []
2. OPERATING TIME AT INSPECTION (HR.) []
3. KEYWAY CRACK DEPTH (MAX.)-(IN.) []
4. BORE CRACK DEPTH (MAX.)-(IN.) []
5. DISK STATUS []

[] INDICATES WESTINGHOUSE PROPRIETARY
LEVELS B,C,E

DATE OF REPORT : 012281

10 # : D280106206

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION

1. BUILDING BLOCK 280
2. UNIT WATERFORD #3
3. CUSTOMER: LOUISIANA PWR. & LT.
4. LP# 3
5. LOCATION GEN
6. DISC# 4
7. TEST NO. TN6324
8. ROTOR NO.
9. S.O. NO.

B. MATERIAL PROPERTIES (HUB)

1. TYPE TC
(MIN. Y-S. [] (KSI))
2. SUPPLIER: L. HELEMAN STEEL
3. Y-S. (KSI) []
4. U.T.S. (KSI) []
5. ELONGATION []
6. R.A. []
7. FATT (DEG.F) []
8. R.T. IMPACT (FT.LB.) []
9. U.S. IMPACT TEMP. (DEG.F) []
10. U.S. IMPACT ENG. (FT.LB.) []
11. U.S. KIC (KSI*SQRT(IN.)) []

C. MATERIAL PROPERTIES (RIM)

1. Y-S. (KSI) []
2. U.T.S. (KSI) []
3. ELONGATION []
4. R.A. []
5. FATT (DEG.F) []
6. R.T. IMPACT (FT.LB.) []
7. U.S. IMPACT TEMP. (DEG.F) []
8. U.S. IMPACT ENG. (FT.LB.) []
9. U.S. KIC (KSI*SQRT(IN.)) []

D. CHEMISTRY

C [] MN [] SI [] P [] CR [] MO [] V []
NI [] AS [] SB [] SN [] AL [] CU [] S []

E. BORE STRESS

SPEED (RPM) STRESS
1. 1800 (KSI) []
2. 2160 (120X) (KSI) []

F. CRACK DATA (KEYWAY RADIUS (IN) [])

1. A-CR-OP (1800 RPM) (IN.) []
2. A-CR-OS (OVERSPEED) (IN.) []

G. SERVICE DATA

1. OPER. TEMP. METAL TEMP. HUB (DEG.F) []
2. ESTIMATED MAX DA/DT (IN/HR) []
3. ESTIMATED MAX DA/DT (IN/MONTH) []

I. INSPECTION STATUS

1. FIRST INSPECTION DATE []
2. OPERATING TIME AT INSPECTION (HR.) []
3. KEYWAY CRACK DEPTH (MAX.)-(IN.) []
4. BORE CRACK DEPTH (MAX.)-(IN.) []
5. DISK STATUS []

[] INDICATES WESTINGHOUSE PROPRIETARY LEVELS B,C,E

DATE OF REPORT : 012281

ID # : 0260106206

LP TURBINE DISC INFORMATION

A. UNIT IDENTIFICATION		B. MATERIAL PROPERTIES (HUB)		C. MATERIAL PROPERTIES (RIM)	
1. BUILDING BLOCK	250	1. TYPE	(KSI)	1. Y-S. (KSI)	
2. UNIT	WATERFORD #1	2. SUPPLIER	MIDVALE HERRINGHILL	2. U-T-S. (KSI)	
3. CUSTOMER	LOUISIANA PUR. & LT.	3. Y-S. (KSI)		3. ELONGATION	
4. LPA	1	4. U-T-S. (KSI)		4. R.A.	
5. LOCATION	GEN	5. ELONGATION		5. FATT (DEG.F)	
6. DISC #	5	6. R.A.		6. R-I- IMPACT (FT-LB.)	
7. TEST NO.	YN6351	7. FATT (DEG.F)		7. U-S. IMPACT (DEG.F)	
8. ROTOR NO.		8. U-S. IMPACT (FT-LB.)		8. U.S. IMPACT ENG. (FT-LB.)	
9. S.O. NO.		9. U.S. KIC (KSI+SQRT(IN.))		9. U.S. KIC (KSI+SQRT(IN.))	

D. CHEMISTRY		E. CRACK DATA (KEYWAY RADIUS (IN))	
1. C	SI	1. A-CR-OP (1800 RPM) (IN.)	
2. NI	AS	2. A-CR-OS (OVERSPEED) (IN.)	
3. AS	SB		
4. NI	AS		
5. NI	AS		
6. NI	AS		
7. NI	AS		
8. NI	AS		
9. NI	AS		
10. NI	AS		
11. NI	AS		

5. BORE STRESS		F. CRACK DATA (KEYWAY RADIUS (IN))	
SPEED (RPM)	STRESS	1. A-CR-OP (1800 RPM) (IN.)	
1. 1800	(KSI)	2. A-CR-OS (OVERSPEED) (IN.)	
2. 2160 (120X)	(KSI)		

6. SERVICE DATA		G. CRACK DATA (KEYWAY RADIUS (IN))	
1. OPER. TEMP. METAL TEMP. HUB (DEG.F)		1. A-CR-OP (1800 RPM) (IN.)	
2. ESTIMATED MAX DAYOT (IN/MON)		2. A-CR-OS (OVERSPEED) (IN.)	
3. ESTIMATED MAX DAYOT (IN/MON)			

I. INSPECTION STATUS		J. CRACK DATA (KEYWAY RADIUS (IN))	
1. FIRST INSPECTION DATE		1. A-CR-OP (1800 RPM) (IN.)	
2. OPERATING TIME AT INSPECTION (HR.)		2. A-CR-OS (OVERSPEED) (IN.)	
3. KEYWAY CRACK DEPTH (MAX.) (IN.)			
4. BORE CRACK DEPTH (MAX.) (IN.)			
5. DISC STATUS			