

User Report of PEAM

Yamamoto Sekiyu K.K.
Industry Sales Dept.
Kimihide Oku

End-user: Nippon Chemical Works Co., Ltd.

Boiler: IHI Packaged Boiler Co., Ltd. Model-KMH4 10t Boiler Manufactured Sep 1970

Tank: 5,000ℓ Heavy Oil A (Inject PEAM 1/10,000 dosage at fuel feed)

Test results: Appendix Chart 1

Observation report

1. The results of November and December are on the last report.
2. After using 2 month, for January 2009, we had confirmed the effect of PEAM as the improvements on the evaporation rate; therefore we understood the fuel efficiency had been improved.
3. After February, unfortunately the production had affected by the economic recession, and the production had been cutback. The total fuel consumption was dropped to the half, and the evaporation rate had also dropped. We understood the aggravation of evaporation rate was caused because the vapor was mainly used for “warming up boiler” not for the production, due to the production cutback.

End-user had confirmed the effect of PEAM by watching the results up to the production cutback was started and satisfied to keep using PEAM.

User Report

End-user	Nippon Chemical Works Co., Ltd.
Boiler	IHI Packaged Boiler Co., Ltd.
	KMH-04A, 10t

Oil	Heavy oil A
Tank	5000 litter

Chart 1-1

November 2008

Date	Fuel (ℓ)	evaporation	evaporation rate
1 SAT			
2 SUN			
3 MON			
4 TUE	294	2,306	7.8
5 WED	315	2,959	9.4
6 THU	359	3,602	10.0
7 FRI	293	2,930	10.0
8 SAT	294	2,655	9.0
9 SUN			
10 MON	414	4,359	10.5
11 TUE	522	5,035	9.6
12 WED	398	3,892	9.8
13 THU	355	3,379	9.5
14 FRI	354	3,390	9.6
15 SAT	367	3,684	10.0
16 SUN			
17 MON	371	3,470	9.4
18 TUE	460	4,600	10.0
19 WED	440	4,335	9.9
20 THU	447	4,453	10.0
21 FRI	517	5,223	10.1
22 SAT			
23 SUN			
24 MON			
25 TUE	511	4,880	9.5
26 WED	354	3,643	10.3
27 THU	383	3,937	10.3
28 FRI	468	4,905	10.5
29 SAT	357	3,695	10.4
30 SUN			
31			
Total	8,273	81,332	205.6

December 2008

Date	Fuel (ℓ)	evaporation	evaporation rate
1 MON	404	3,799	9.4
2 TUE	413	4,282	10.3
3 WED	432	4,542	10.5
4 THU	362	3,596	9.9
5 FRI	394	4,077	10.3
6 SAT	403	4,035	10.0
7 SUN			
8 MON	418	4,064	9.7
9 TUE	320	3,138	9.8
10 WED	231	2,141	9.3
11 THU	328	3,265	10.0
12 FRI	399	4,143	10.4
13 SAT			
14 SUN			
15 MON	464	4,458	9.6
16 TUE	401	4,146	10.3
17 WED	572	3,795	10.2
18 THU	315	3,162	10.0
19 FRI	412	4,271	10.4
20 SAT	413	4,214	10.2
21 SUN			
22 MON	436	4,431	10.2
23 TUE			
24 WED	485	4,855	10.0
25 THU	356	3,234	9.1
26 FRI	294	2,792	9.5
27 SAT	197	1,931	9.8
28 SUN			
29 MON			
30 TUE			
31 WED			
Total	8,449	82,371	218.9

Operating days 21 days
 Average evaporation rate (205.6/21) 9.79
 Average evaporation rate in 2007 9.71

Operating days 22 days
 Average evaporation rate (218.9/22) 9.95
 Average evaporation rate in 2007 9.71

Chart 1-2

January 2009

Date	Fuel (ℓ)	evaporation	evaporation rate
1 THU			
2 FRI			
3 SAT			
4 SUN			
5 MON	399	3,331	8.3
6 TUE	442	4,726	10.7
7 WED	453	4,715	10.4
8 THU	434	4,503	10.4
9 FRI	439	4,675	10.6
10 SAT			
11 SUN			
12 MON			
13 TUE	398	3,608	9.1
14 WED	459	4,766	10.4
15 THU	488	5,168	10.6
16 FRI	371	4,279	11.5
17 SAT	296	2,839	9.6
18 SUN			
19 MON	368	3,564	9.7
20 TUE	434	4,487	10.2
21 WED	468	4,949	10.6
22 THU	399	4,055	10.2
23 FRI	275	2,740	10.0
24 SAT			
25 SUN			
26 MON	422	3,879	9.2
27 TUE	442	4,602	10.4
28 WED	443	4,715	10.0
29 THU	312	3,152	10.1
30 FRI	221	2,105	9.5
31 SAT	226	2,172	9.6
Total	8,189	83,030	211.1

Operating days 21 days
 Average evaporation rate (211.1/21) 10.05
 Average evaporation rate in 2007 9.71

February 2009

Date	Fuel (ℓ)	evaporation	evaporation rate
1 SUN			
2 MON	287	2,388	8.3
3 TUE	294	2,907	9.9
4 WED	339	3,493	10.3
5 THU	339	3,408	10.0
6 FRI	351	3,578	10.2
7 SAT			
8 SUN			
9 MON	347	3,180	9.2
10 TUE	331	3,292	9.9
11 WED			
12 THU	348	3,399	9.8
13 FRI	293	2,869	9.8
14 SAT	240	2,369	9.7
15 SUN			
16 MON	364	3,524	9.7
17 TUE	278	2,703	9.7
18 WED	255	2,393	9.3
19 THU	364	3,717	10.2
20 FRI	287	2,842	9.9
21 SAT	223	2,422	10.9
22 SUN			
23 MON	324	2,694	8.3
24 TUE	263	2,479	9.4
25 WED	234	2,219	9.5
26 THU	352	2,414	6.9
27 FRI	255	2,464	9.7
28 SAT			
29			
30			
31			
Total	6,368	60,754	200.6

Operating days 21 days
 Average evaporation rate (200.6/21) 9.55
 Average evaporation rate in 2007 9.71

Chart 1-3

March 2009

Date	Fuel (ℓ)	evaporation	evaporation rate
1	SUN		
2	MON	367	3,328 9.1
3	TUE	413	4,320 10.5
4	WED	376	3,840 10.2
5	THU	269	2,638 9.8
6	FRI	221	2,297 10.4
7	SAT	250	2,175 8.7
8	SUN		
9	MON	255	2,213 8.7
10	TUE	235	2,206 9.4
11	WED	230	2,154 9.4
12	THU	236	2,269 9.4
13	FRI		
14	SAT		
15	SUN		
16	MON	252	1,910 7.6
17	TUE	196	1,826 9.3
18	WED	179	1,549 8.7
19	THU	162	1,326 8.2
20	FRI	300	2,085 6.5
21	SAT		
22	SUN		
23	MON	220	1,835 8.3
24	TUE	246	2,311 9.4
25	WED	223	2,066 9.3
26	THU		
27	FRI		
28	SAT		
29	SUN		
30	MON		
31	TUE		
Total		4,630	42,348 162.9

Operating days 18 days
 Average evaporation rate (162.9/18) 9.05
 Average evaporation rate in 2007 9.71

April 2009

Date	Fuel (ℓ)	evaporation	evaporation rate
1	WED		
2	THU		
3	FRI		
4	SAT		
5	SUN		
6	MON		
7	TUE		
8	WED		
9	THU		
10	FRI		
11	SAT		
12	SUN		
13	MON		
14	TUE		
15	WED		
16	THU		
17	FRI		
18	SAT		
19	SUN		
20	MON		
21	TUE		
22	WED		
23	THU		
24	FRI		
25	SAT		
26	SUN		
27	MON		
28	TUE		
29	WED		
30	THU		
31			
Total		0	0 0.0

Operating days
 Average evaporation rate
 Average evaporation rate in 2007 9.71