

Summary Results:

- ⊙ IceCOLD[®] Pilot Testing
- ⊙ Chiller System
- ⊙ Tesco, Setia Alam

Equipment Specification, IceCOLD[®] Catalyst Volume:

Specifications of Chiller System Compressors	Oil Charge
⊙ 3x Bitzer 6H25.2 Y 3x 4.75dm ³	14195.29 ml
⊙ Henry Valve Co Oil Separator S-1903	591.47 ml
⊙ Emerson AOR-4 Oil Reservoir	15141.65 ml
Total	29928.41 ml
⊙ Ratio for IceCOLD [®] install volume 11%	3292.13 ml
⊙ Refrigerant Type	404a

Data Sources:

- ⊙ kWh from Danfoss System (Tesco's own) measuring both freezer and chiller systems kWh consumption. IceCOLD[®] was only installed into the chiller system.
- ⊙ Cdd readings from www.weatherunderground.com Weather Station code WMKK

Data Summary:

Log	Date	Series Point	KWH	CDD
Baseline 1	6dec-12dec 2010	1	34987	126
Baseline 2	13dec-19dec	2	34376	117
Baseline 3	20dec-26dec	3	34518	117
Baseline 4	3jan-9jan	4	34339	115
Post 1 IceCOLD Install	7feb-13feb 2011	5	34489	130
Post 2	14feb-20feb	6	34572	136
Post 3	21feb-27feb	7	34619	142
Post 4	7mar-13mar	8	34149	123
Post 5	14mar-20mar	9	34101	130
Post 6	21mar-27mar	10	34382	127
Post 7	28mar-3apr	11	35849	145
Post 8	4apr-10apr	12	33650	133
Post 9	11apr-17apr	13	33362	129
Post 10	18-24apr	14	34553	140
Post 11	25apr-1may	15	34783	130
Post 12	2may-8may	16	35680	154
Post 13	16may-22may	17	33747	134
Post 14	6jun-12jun	18	33742	133
Post 15	13jun-19jun	19	33684	138
Post 16	20jun-26jun	20	33333	135
Post 17	27jun-3jul	21	33416	125
Post 18	4jul-10jul	22	33200	130
Post 19	11jul-17jul	23	33047	128
Post 21	25jul-31jul	25	33572	127
Post 22	1aug-7aug	26	34048	132
Post 23	8aug-14aug	27	33642	132
Post 24	15aug-21aug	28	33543	135
Post 25	22aug-28aug	29	33224	126
Post 26	29aug-4sep	30	33015	128
Post 27	5sep-11sep	31	33296	129
Post 28	12-18sep	32	33501	135
Post 29	19-25sep	33	33297	124
Post 30	26sep-2oct	34	33897	131
Post 31	3oct-9oct	35	33459	125
Post 32	10oct-16oct	36	34196	138
Post 33	17oct-23oct	37	33187	124
Post 34	24oct-30oct	38	33444	131
Post 35	31oct-6nov	39	33283	122
Post 36	7nov-13nov	40	33624	129
Post 37	14nov-20nov	41	33294	127
Post 38	21nov-27nov	42	33640	133

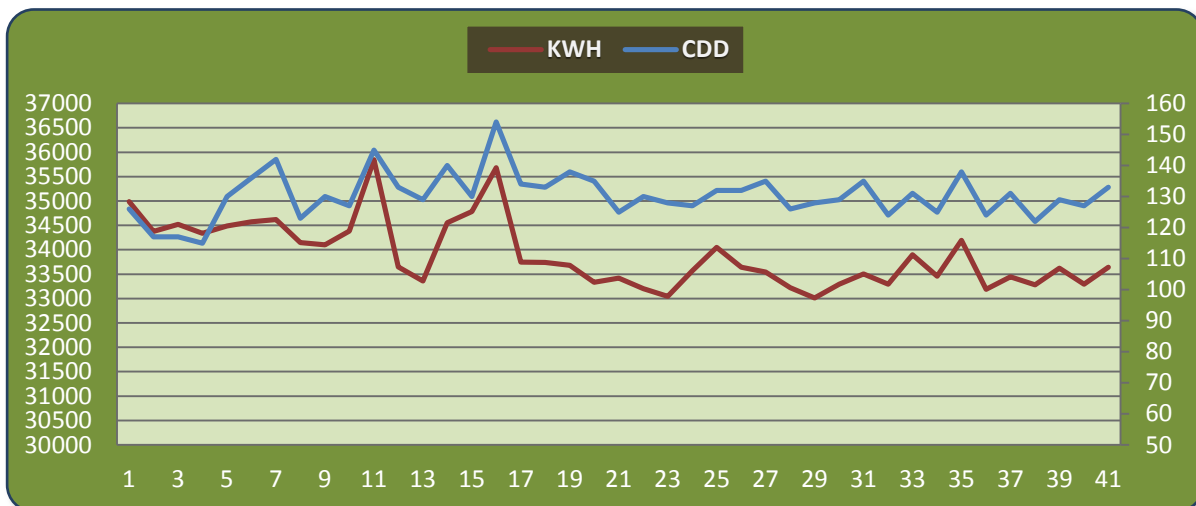
Ratio of total kWh / Cdd before and after IceCOLD®

	kWh	Cdd	kWh/Cdd
Baseline	207331	710	292.0155
Post Install	1379389	5373	256.726
Efficiency Gain	12.08%		Over the total site kWh

The Danfoss kWh data is a cumulative reading for the chiller freezer system.
 The chiller system recorded to use approximately 48% of the total kWh.
 IceCOLD® treated only the chiller system with IceCOLD® Catalyst.
 Therefore if we must conclude the 12.08% is coming from 48% of the total kWh.

Conclusions:

- ⊖ 12.08% Reduction from total site kWh Baseline to Post Install.
- ⊖ 48% of the total plant kWh consumption.
- ⊖ **25.16% efficiency gain in the chiller system.**





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Our Ref:

Your Ref:

31st May 2012

TO :
WHOM IT MAY CONCERN

**Re: PILOT STUDY ON USAGE AND EFFECTIVENESS OF ICECOLD CATALYST ON TESCO
REFRIGERATION SYSTEM AT TESCO SETIA ALAM
Vendor : Ice Cold Solution (M) Sdn Bhd**

We hereby confirm that Ice Cold Solution (M) Sdn Bhd address of :

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Gill House
92, Jalan Seremban
P O Box 27, 71 007 Port Dickson
Negeri Sembilan Darul Khusus

has done a pilot study in Tesco Setia Alam relating to the refrigeration system from the 17-January-2011 till October 2011 and the results showed improvement in the electricity consumption on the chiller system.

Thank you.

Yours faithfully,
Tesco Stores (Malaysia) Sdn Bhd

Tom Ward
Property Services Director

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