



Plant Maintenance Resource Center

2006 Maintenance Salary Survey Results

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Overview

The eighth annual survey of salaries in the Maintenance sector was conducted on the Plant Maintenance Resource Center website between January and September 2006. This salary survey is a regular, annual event. Results of previous Salary surveys are available at the following locations:

1999 Salary survey results	www.plant-maintenance.com/articles/salarysurvey99.shtml
2000 Salary Survey results	www.plant-maintenance.com/articles/salarysurvey00.shtml
2001 Salary Survey results	www.plant-maintenance.com/articles/salarysurvey01.shtml
2002 Salary Survey results	www.plant-maintenance.com/articles/salarysurvey02.shtml
2003 Salary Survey results	www.plant-maintenance.com/articles/salarysurvey03.pdf
2004 Salary Survey results	www.plant-maintenance.com/articles/salarysurvey04.pdf
2005 Salary Survey results	www.plant-maintenance.com/articles/salarysurvey05.pdf

The 2007 Maintenance Salary survey will open in mid-January 2007, so make a note to check back at www.plant-maintenance.com/survey.shtml then (if not before!).

Raw Data - Overview

Voluntary (and confidential) responses were sought to the survey, and 694 valid responses were received. This compares with 341 responses last year, and is a higher number of responses than in any other previous year. The total number of valid responses received in previous years is tabulated below:

Year	No of Valid Responses
2006	694
2005	341
2004	447
2003	158
2002	180
2001	248
2000	320
1999	290

This year's survey was open for longer than last year, and this may be the reason behind the higher number of responses.

Raw Data - Industries

The majority of responses, once again, was from individuals in the Manufacturing industries, with a significant number coming from the Services sector (Defence, Property/Building Services, Contract Maintenance, Consulting etc.).

Industry Group	2006	
	Responses	% of Total
Agriculture	4	0.6%
Construction	5	0.7%
Manufacturing	399	57.5%
Mining	45	6.5%
Oil and Gas	28	4.0%
Other	15	2.2%
Services	137	19.7%
Trade	9	1.3%
Utilities	52	7.5%

A complete list of industries represented in the last 4 surveys is tabulated below.

Industry	2006		2005		2004		2003	
	Responses	% of Total						
Agriculture - Commercial fishing	1	0.1%	0	0.0%	0	0.0%	0	0.0%
Agriculture – Forestry and Logging	0	0.0%	0	0.0%	1	0.2%	0	0.0%
Agriculture: Other	3	0.4%	2	0.6%	2	0.4%	0	0.0%
Construction: General	5	0.7%	3	0.9%	2	0.4%	0	0.0%
Manufacturing: Food, beverages, tobacco	75	10.8%	39	11.4%	36	8.1%	14	8.9%
Manufacturing: Machinery and equipment	39	5.6%	14	4.1%	26	5.8%	14	8.9%
Manufacturing: Metal products	95	13.7%	36	10.6%	40	8.9%	19	12.0%
Manufacturing: Non-metallic mineral processing	13	1.9%	11	3.2%	6	1.3%	4	2.5%
Manufacturing: Other	40	5.8%	13	3.8%	33	7.4%	4	2.5%
Manufacturing: Petroleum refining, chemicals and associated products	76	10.9%	29	8.5%	62	13.9%	14	8.9%
Manufacturing: Printing, publishing, and recorded media	14	2.0%	6	1.8%	15	3.4%	3	1.9%
Manufacturing: Textiles, clothing, footwear, leather	11	1.6%	2	0.6%	7	1.6%	2	1.3%
Manufacturing: Wood and paper products	36	5.2%	21	6.2%	30	6.7%	15	9.5%
Mining: Coal	7	1.0%	7	2.1%	2	0.4%	3	1.9%
Mining: Metal ore	25	3.6%	15	4.4%	13	2.9%	4	2.5%
Mining: Other	9	1.3%	5	1.5%	4	0.9%	3	1.9%
Mining: Services to Mining	4	0.6%	3	0.9%	4	0.9%	0	0.0%
Oil and Gas: Oil and gas extraction	28	4.0%	13	3.8%	22	4.9%	3	1.9%
Other	15	2.2%	13	3.8%	7	1.6%	4	2.5%
Services: Business Services/Consulting	14	2.0%	4	1.2%	15	3.4%	5	3.2%

Industry	2006		2005		2004		2003	
	Responses	% of Total						
Services: Contract Maintenance/Repairs	30	4.3%	11	3.2%	21	4.7%	7	4.4%
Services: Defence	3	0.4%	4	1.2%	1	0.2%	4	2.5%
Services: Education/Academia	15	2.2%	4	1.2%	15	3.4%	4	2.5%
Services: Healthcare	15	2.2%	8	2.3%	5	1.1%	4	2.5%
Services: Other	8	1.1%	8	2.3%	11	2.5%	2	1.3%
Services: Property services/Building Maintenance	36	5.2%	11	3.2%	23	5.1%	8	5.1%
Services: Research & Development	2	0.3%	3	0.9%	1	0.2%	4	2.5%
Services: Software Development/Sales	4	0.6%	3	0.9%	4	0.9%	0	0.0%
Services: Telecommunications	2	0.3%	1	0.3%	3	0.7%	0	0.0%
Services: Transport	8	1.1%	8	2.3%	5	1.1%	1	0.6%
Trade: Retail	4	0.6%	7	2.1%	4	0.9%	0	0.0%
Trade: Wholesale	5	0.7%	1	0.3%	1	0.2%	1	0.6%
Utilities: Electricity Generation	27	3.9%	20	5.9%	15	3.4%	8	5.1%
Utilities: Electricity Transmission and Distribution	4	0.6%	3	0.9%	1	0.2%	2	1.3%
Utilities: Gas supply	5	0.7%	3	0.9%	5	1.1%	0	0.0%
Utilities: Water, sewerage, drainage	16	2.3%	10	2.9%	4	0.9%	2	1.3%

Raw Data - Countries

Slightly less than half of the responses received were from the USA. The next most represented country was Australia followed by India, Canada, Indonesia, United Kingdom and South Africa as the countries with the next greatest number of responses. Responses were received from 58 countries.

Country	2006		2005		2004		2003	
	Responses	% of Total						
United States	346	49.9%	166	48.7%	246	55.0%	79	50.0%
Australia	53	7.6%	28	8.2%	44	9.8%	21	13.3%
India	43	6.2%	13	3.8%	11	2.5%	5	3.2%
Canada	41	5.9%	20	5.9%	31	6.9%	5	3.2%
Other	28	4.0%	17	5.0%	9	2.0%	7	4.4%
Indonesia	13	2.6%	9	2.6%	6	1.3%	1	0.6%
United Kingdom	18	2.3%	7	2.1%	18	4.0%	5	3.2%
South Africa	16	1.9%	7	2.1%	10	2.2%	3	1.9%
Malaysia	8	1.1%	6	1.8%	4	0.9%		
Netherlands	8	1.1%	5	1.5%	3	0.7%	1	0.6%
Brazil	8	1.1%	3	0.9%	3	0.7%		
Saudi Arabia	7	1.0%	1	0.3%	5	1.1%	1	0.6%
United Arab Emirates	7	1.0%	1	0.3%				
Singapore	6	0.9%	2	0.6%	2	0.4%	1	0.6%

	2006		2005		2004		2003	
Country	Responses	% of Total						
Ireland	6	0.9%	1	0.3%	1	0.2%	1	0.6%
New Zealand	5	0.7%	6	1.8%	3	0.7%	2	1.3%
Nigeria	5	0.7%	1	0.3%	1	0.2%		
China (PRC)	4	0.6%			2	0.4%		
France	3	0.4%	5	1.5%	5	1.1%	5	3.2%
Chile	3	0.4%	4	1.2%			1	0.6%
Romania	3	0.4%	3	0.9%	3	0.7%	1	0.6%
Egypt	3	0.4%	2	0.6%	3	0.7%	1	0.6%
Thailand	3	0.4%	2	0.6%	1	0.2%		
Pakistan	3	0.4%	1	0.3%	1	0.2%		
Philippines	2	0.3%	3	0.9%	2	0.4%	1	0.6%
Spain	2	0.3%	2	0.6%				
Botswana	2	0.3%	2	0.6%				
Germany	2	0.3%	1	0.3%	3	0.7%		
Venezuela	2	0.3%	1	0.3%	2	0.4%		
Colombia	2	0.3%	1	0.3%	1	0.2%	3	1.9%
Italy	2	0.3%	1	0.3%	1	0.2%	1	0.6%
Israel	2	0.3%	1	0.3%	1	0.2%		
Kuwait	2	0.3%			2	0.4%		
Russia	2	0.3%			1	0.2%		
Turkey	2	0.3%						
Slovenia	2	0.3%						
Portugal	2	0.3%						
Papua New Guinea	2	0.3%						
Yemen	2	0.3%						
Lebanon	2	0.3%						
Slovenia	2	0.1%						
Belgium	1	0.1%	4	1.2%	4	0.9%		
Mexico	1	0.1%	2	0.6%	3	0.7%		
Zambia	1	0.1%	2	0.6%	2	0.4%		
Finland	1	0.1%	2	0.6%				
Libya	1	0.1%	1	0.3%				
Greece	1	0.1%	1	0.3%				
Zimbabwe	1	0.1%			1	0.2%	1	0.6%
Dominican Republic	1	0.1%			1	0.2%	1	0.6%
Slovak Republic	1	0.1%			1	0.2%		
Serbia	1	0.1%			1	0.2%		
Argentina	1	0.1%			1	0.2%		
Oman	1	0.1%			1	0.2%		
Denmark	1	0.1%					1	0.6%
Norway	1	0.1%					1	0.6%
Korea	1	0.1%						
Vietnam	1	0.1%						
Japan	1	0.1%						

Country	2006		2005		2004		2003	
	Responses	% of Total						
Sri Lanka	1	0.1%						
Surinam	1	0.1%						
Ghana	1	0.1%						
Sweden			1	0.3%	2	0.4%	1	0.6%
Hungary			1	0.3%				
Mozambique			1	0.3%				
Lesotho			1	0.3%				
Jamaica			1	0.3%				
El Salvador			1	0.3%				
Czech Republic			1	0.3%				
Taiwan					1	0.2%		
Tanzania					1	0.2%		
Ethiopia					1	0.2%		
Peru					1	0.2%		
Trinidad					1	0.2%		
Qatar							2	1.3%
Iran							1	0.6%
Antarctica							1	0.6%
Northern Mariana Islands							1	0.6%

Raw Data - States

For the responses received from US participants, the States with the largest number of respondents were Texas, California, Florida, North Carolina, Georgia, and South Carolina. Compared with previous years, there has been a significant relative increase in the number of responses from the Carolinas, and a reduction in responses from Ohio..

State	2006		2005		2004		2003	
	Responses	% of Total						
Texas	31	9.0%	18	10.8%	17	6.9%	5	6.3%
California	21	6.1%	7	4.2%	17	6.9%	4	5.1%
Florida	19	5.5%	6	3.6%	10	4.1%	1	1.3%
North Carolina	16	4.6%	3	1.8%	8	3.3%	4	5.1%
Georgia	15	4.3%	9	5.4%	10	4.1%	3	3.8%
South Carolina	15	4.3%	6	3.6%	5	2.0%		
Ohio	14	4.0%	11	6.6%	25	10.2%	7	8.9%
Indiana	13	3.8%	3	1.8%	11	4.5%	4	5.1%
Virginia	12	3.5%	8	4.8%	3	1.2%	4	5.1%
Wisconsin	11	3.2%	7	4.2%	8	3.3%	5	6.3%
Illinois	11	3.2%	4	2.4%	8	3.3%	5	6.3%
Louisiana	11	3.2%	1	0.6%	5	2.0%	1	1.3%
Washington	10	2.9%						
Pennsylvania	9	2.6%	7	4.2%	8	3.3%	1	1.3%
Tennessee	8	2.3%	11	6.6%	8	3.3%	4	5.1%
Kentucky	8	2.3%	7	4.2%	9	3.7%	3	3.8%

State	2006		2005		2004		2003	
	Responses	% of Total						
Massachusetts	8	2.3%	2	1.2%	6	2.4%	3	3.8%
Iowa	8	2.3%	2	1.2%				
Michigan	7	2.0%	4	2.4%	8	3.3%	2	2.5%
Minnesota	7	2.0%	4	2.4%	6	2.4%	5	6.3%
Arizona	7	2.0%	4	2.4%	5	2.0%	2	2.5%
Oregon	7	2.0%	3	1.8%	3	1.2%	1	1.3%
New York	6	1.7%	5	3.0%	10	4.1%	4	5.1%
Oklahoma	6	1.7%	2	1.2%	3	1.2%	2	2.5%
New Hampshire	6	1.7%			1	0.4%	1	1.3%
Missouri	5	1.4%	3	1.8%	5	2.0%	2	2.5%
New Jersey	5	1.4%	3	1.8%	2	0.8%	2	2.5%
Kansas	5	1.4%	1	0.6%	5	2.0%		
Maryland	5	1.4%			2	0.8%		
Arkansas	4	1.2%	1	0.6%	1	0.4%		
Connecticut	4	1.2%	1	0.6%	5	2.0%	1	1.3%
Nevada	4	1.2%	1	0.6%	1	0.4%		
Alabama	4	1.2%			6	2.4%	3	3.8%
New Mexico	4	1.2%			2	0.8%		
Mississippi	3	0.9%	2	1.2%	1	0.4%		
Colorado	2	0.6%	2	1.2%	3	1.2%		
West Virginia	2	0.6%			3	1.2%		
Nebraska	2	0.6%	1	0.6%	1	0.4%		
Idaho	1	0.3%	5	3.0%	1	0.4%	1	1.3%
Vermont	1	0.3%	3	1.8%				
Rhode Island	1	0.3%	1	0.6%				
Maine	1	0.3%						
Washington			2	1.2%	7	2.8%		
Wyoming			2	1.2%	2	0.8%	1	1.3%
Utah			2	1.2%	1	0.4%	1	1.3%
Alaska			1	0.6%	4	1.6%	1	1.3%
Montana			1	0.6%	1	0.4%		
Delaware			1	0.6%				
South Dakota			1	0.6%				

Raw Data - Job Positions

As in previous years, the positions with the greatest representation in the survey were Maintenance Managers/Superintendents, followed by Maintenance Technicians, Plant/Maintenance Engineers, Maintenance Foremen/Supervisors and Maintenance Planners. Proportionally, there has been an increase in the number of responses from Maintenance Technicians over the last few years.

Position	2006		2005		2004		2003	
	Responses	% of Total						
Maintenance Manager/Superintendent	187	26.9%	79	23.2%	108	24.2%	46	29.1%

Maintenance Technician	113	16.3%	45	13.2%	56	12.5%	22	13.9%
Plant/Maintenance Engineer	98	14.1%	50	14.7%	63	14.1%	33	20.9%
Maintenance Foreman/Supervisor	93	13.4%	48	14.1%	58	13.0%	14	8.9%
Maintenance Planner	49	7.1%	24	7.0%	30	6.7%	17	10.8%
Maintenance Crafts/Tradesperson	37	5.3%	16	4.7%	25	5.6%	8	5.1%
Other	29	4.2%	22	6.5%	26	5.8%	2	1.3%
Consulting Engineer	12	1.7%	11	3.2%	15	3.4%		
Process/Industrial Engineer	10	1.4%	5	1.5%	8	1.8%	2	1.3%
Maintenance Contract Manager	8	1.1%	1	0.3%	4	0.9%		
Management Consultant	7	1.0%	2	0.6%	7	1.6%	1	0.6%
CEO/Managing Director	6	0.9%	3	0.9%	5	1.1%	2	1.3%
Maintenance Clerk	6	0.9%	1	0.3%	5	1.1%		
Teacher/Academic	6	0.9%			2	0.4%		
Maintenance Accountant	5	0.7%	4	1.2%	3	0.7%	1	0.6%
Reliability Engineer	4	0.6%	3	0.9%	3	0.7%	2	1.3%
Product Support Manager	4	0.6%			1	0.2%		
Consulting Manager	2	0.3%	5	1.5%	1	0.2%	1	0.6%
Product Support Technician	2	0.3%	2	0.6%	1	0.2%		
Computer/IT Consultant	2	0.3%	1	0.3%	6	1.3%	1	0.6%
Projects Manager	2	0.3%	1	0.3%				
Software Support Manager	2	0.3%			1	0.2%		
Maintenance Contract Officer	1	0.1%	2	0.6%	2	0.4%	1	0.6%
Facility Manager	1	0.1%	2	0.6%				
Marketing/Business Development/Sales Manager	1	0.1%	1	0.3%	5	1.1%		
Operations/Plant Manager	1	0.1%	1	0.3%	3	0.7%		
Student	1	0.1%	1	0.3%	3	0.7%		
Research Technician	1	0.1%	1	0.3%	2	0.4%		
Marketing Officer/Business Development Officer/Salesperson	1	0.1%	1	0.3%				
Reliability Technician	1	0.1%	1	0.3%				
Design Engineer	1	0.1%					1	0.6%
Research Manager	1	0.1%					1	0.6%
Predictive Maintenance Specialist			3	0.9%				
Product Support Professional			1	0.3%	4	0.9%	1	0.6%
Maintenance Systems Specialist			1	0.3%				
Plant Inspector			1	0.3%				
Reliability Manager			1	0.3%				
Engineering Assistant			1	0.3%				
Research Professional							1	0.6%

Raw Data - Educational Levels

The distribution of educational levels was similar to last year. As in previous years, participants with 'Certificate/Diploma/Associate Degree' and 'Undergraduate/College Degree' educational levels dominate the survey

results with a combined representation of 57%. The proportion of respondents with Masters degrees appears to be steadily falling over recent years.

Education	2006		2005		2004		2003	
	Responses	% of Total						
High School	125	18.0%	61	17.9%	68	15.2%	24	15.2%
Formal Trade Training	93	13.4%	52	15.2%	69	15.4%	22	13.9%
Certificate/Diploma/Associate Degree	201	29.0%	96	28.2%	126	28.2%	52	32.9%
Undergraduate/College (Bachelors) degree	196	28.2%	86	25.2%	123	27.5%	24	21.5%
Post Graduate (Masters) degree	70	10.1%	43	12.6%	59	13.2%	24	15.2%
Post Graduate (Doctorate) degree	9	1.3%	3	0.9%	2	0.4%	2	1.3%

Raw Data - Work Experience

A wide range of work experience was represented, with the distribution of experience being similar to previous years. What is noticeable however is an increase in representation from respondents with less than 5 years experience, and some decline in representation from those participants with 25yrs experience or more.

Experience	2006		2005		2004		2003	
	Responses	% of Total						
0 to 5	157	22.6%	68	19.9%	76	17.0%	23	14.6%
5 to 10	111	16.0%	55	16.1%	72	16.1%	25	15.8%
10 to 15	128	18.4%	66	19.4%	74	16.6%	26	16.5%
15 to 20	105	15.1%	56	16.4%	74	16.6%	22	13.9%
20 to 25	92	13.3%	46	13.5%	65	14.5%	29	18.4%
25 to 30	65	9.4%	29	8.5%	53	11.9%	22	13.9%
more than 30	36	5.2%	21	6.2%	33	7.4%	11	7.0%

Raw Data - Salaries

The total annual earnings, inclusive of all benefits, displayed a similar distribution to previous years, although the distribution appears "flatter" than previous years. It is interesting to note the proportional increase of those with earnings less than US\$20,000. This appears to be largely due to the increase in respondents from countries with overall lower level of earnings. For example, of the 106 respondents who fell into this salary band, 31 were from India (72% of all Indian respondents), 9 were from Indonesia (64% of all Indonesian respondents), 4 were from Malaysia (50% of all Malaysian respondents), 3 were from China (75% of all Chinese respondents), while 14 were from the USA (only 4% of all US respondents). It would appear that, in future surveys, we will need to increase the number of salary bands at lower levels to account for this.

Salary Band (US\$)	2006		2005		2004		2003	
	Responses	% of Total						
0-20,000	106	15.3%	49	14.4%	53	11.9%	14	8.9%
20,001-25,000	22	3.2%	8	2.3%	9	2.0%	9	5.7%
25,001-30,000	24	3.5%	7	2.1%	13	2.9%	2	1.3%
30,001-35,000	39	5.6%	17	5.0%	22	4.9%	9	5.7%
35,001-40,000	42	6.0%	15	4.4%	28	6.3%	15	9.5%
40,001-45,000	44	6.3%	20	5.9%	29	6.5%	11	7.0%

45,001-50,000	38	5.5%	25	7.3%	35	7.8%	21	13.3%
50,001-55,000	49	7.1%	26	7.6%	31	6.9%	13	8.2%
55,001-60,000	43	6.2%	38	11.1%	36	8.1%	14	8.9%
60,001-65,000	36	5.2%	20	5.9%	43	9.6%	8	5.1%
65,001-70,000	46	6.6%	22	6.5%	37	8.3%	5	3.2%
70,001-75,000	39	5.6%	15	4.4%	19	4.3%	8	5.1%
75,001-80,000	27	3.9%	18	5.3%	16	3.6%	6	3.8%
80,001-85,000	30	4.3%	10	2.9%	11	2.5%	6	3.8%
85,001-90,000	18	2.6%	13	3.8%	9	2.0%	2	1.3%
90,001-95,000	14	2.0%	5	1.5%	14	3.1%	4	2.5%
95,001-100,000	14	2.0%	7	2.1%	8	1.8%	3	1.9%
100,001-110,000	22	3.2%	2	0.6%	9	2.0%	2	1.3%
110,001-120,000	11	1.6%	9	2.6%	11	2.5%	0	0.0%
120,001-130,000	6	0.9%	5	1.5%	3	0.7%	3	1.9%
130,001-140,000	6	0.9%	3	0.9%	3	0.7%	1	0.6%
140,001-150,000	3	0.4%	2	0.6%	4	0.9%	1	0.6%
150,001-175,000	4	0.6%	4	1.2%	3	0.7%	0	0.0%
175,001-200,000	5	0.7%	1	0.3%	0	0.0%	1	0.6%
more than 200,000	6	0.9%	0	0.0%	1	0.2%	0	0.0%

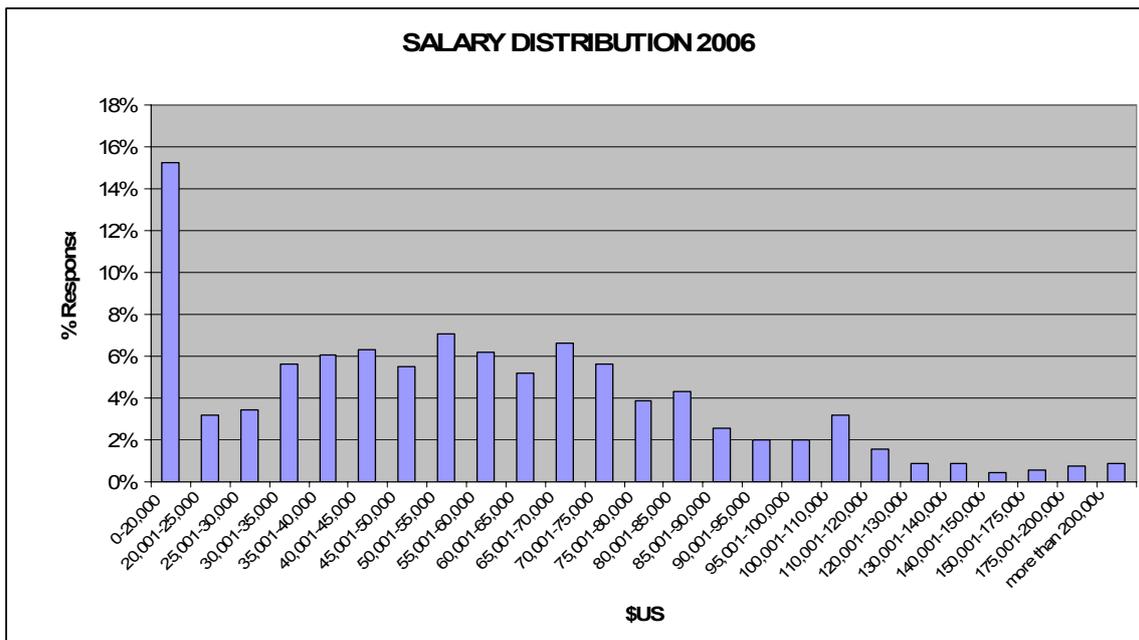


Fig. 1

At approximately US\$56,500, the overall average salary in 2006 was \$56,477, compared to \$56,576 in 2005, and \$56,577 in 2004. The average salary has therefore essentially been the same for the last three years. This is perhaps due to the previously made observation regarding the increasing proportion of respondents from countries with lower overall salary levels. This observation is also supported by examining the median salary which represents the 50% percentile. This has also dropped slightly this year at \$52,500, but within a slightly greater distribution. The bottom 25% percentile has dropped, whilst the 75% percentile has remained unchanged, suggesting that overall salary distributions are widening. See Figure 2 below for a graphical representation of this.

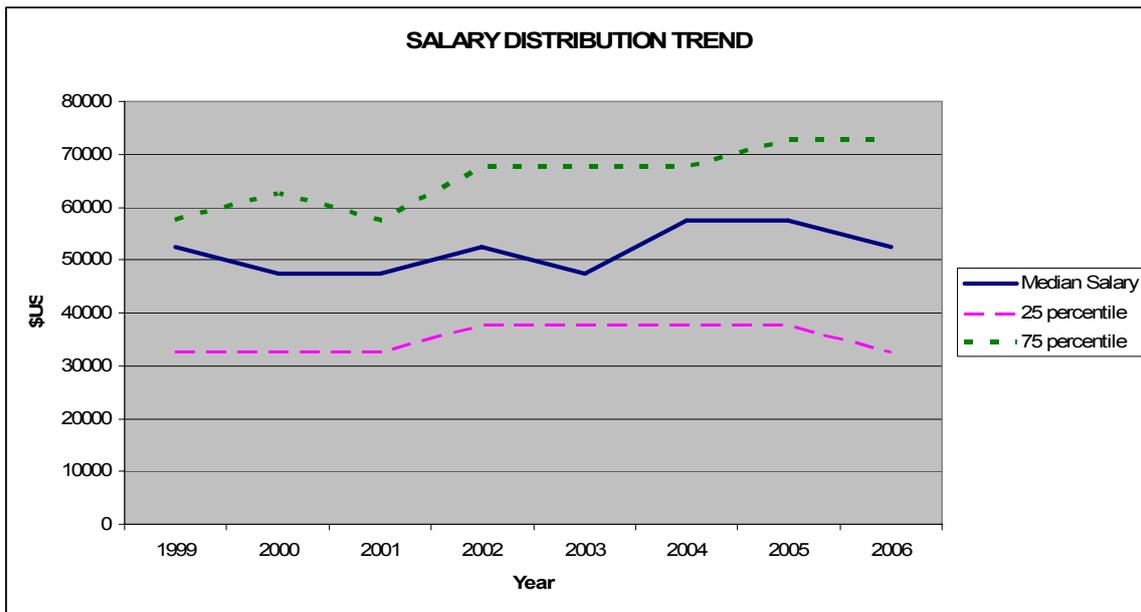


Fig. 2

Overall Results

The median salary for the 2006 survey was \$US 52,500 lying within the band US\$50,001-\$55,000. This represents a slight reduction from last year. Assuming the average salary for each band is the midpoint of each band, the mean salary in 2006 is US\$56,477 which is essentially unchanged from the previous two years. Comparisons with previous years are shown in the following table.

Year	Median Salary Band	Approximate Mean Salary
2006	US\$50,001-\$55,000	US\$56,477
2005	US\$55,001-\$60,000	US\$56,576
2004	US\$55,001-\$60,000	US\$56,577
2003	US\$45,001-\$50,000	US\$53,623
2002	US\$50,001-\$55,000	US\$54,917
2001	US\$45,001-\$50,000	US\$51,290
2000	US\$45,001-\$50,000	US\$52,523
1999	US\$50,001-\$55,000	US\$53,521

As discussed earlier, the changing mix of respondents, plus variations in currency exchange rates could explain some of the variations in the above table, rather than any underlying trend in salary movements.

Salary by Industry

An analysis of salaries by industry (for those industries with 5 or more responses) indicated that the industry paying the highest salaries in 2006 was Mining – Coal, knocking off Oil and Gas - Oil and Gas Extraction from its customary top position on this table. Consulting remains a relatively highly paid area, while some Manufacturing sectors, such as Food, beverages and tobacco, and wood and paper products appear to have demonstrated significant salary increases, and Petroleum refining salaries appear to be in a downwards trend.

Industry	2006	2005	2004	2003	2002
Mining - Coal	\$107,500	\$83,571			
Services - Business Services/Consulting	\$93,036		\$81,667		\$60,000
Oil and Gas - Oil and gas extraction	\$82,946	\$83,846	\$88,636		\$62,500
Mining - Metal ore	\$80,300	\$73,333	\$80,385		
Mining - Other	\$74,444				
Manufacturing - Food, beverages, tobacco	\$63,767	\$52,179	\$54,054	\$43,393	\$50,536
Manufacturing - Wood and paper products	\$62,014	\$56,310	\$52,917	\$56,167	\$60,625
Utilities - Electricity Generation	\$57,037	\$63,375	\$65,167	\$56,250	\$49,167
Services - Transport	\$54,688	\$54,375			
Manufacturing - Metal products	\$54,158	\$51,319	\$54,000	\$49,605	\$58,182
Manufacturing - Petroleum refining, chemicals and associated products	\$53,257	\$56,207	\$58,145	\$56,429	\$59,519
Services - Other	\$53,125	\$49,688	\$36,591		
Other	\$52,895	\$60,463	\$58,705	\$58,898	\$47,446
Manufacturing - Other	\$52,188	\$53,846	\$56,515		\$55,000
Services - Property services/Building Maintenance	\$51,597	\$42,273	\$46,304	\$36,563	\$52,778
Services - Healthcare	\$51,000	\$45,625			
Utilities - Water, sewerage, drainage	\$47,969	\$51,750			
Manufacturing - Textiles, clothing, footwear, leather	\$47,045		\$49,643		
Manufacturing - Non - metallic mineral processing	\$44,231	\$56,364	\$34,583		
Manufacturing - Machinery and equipment	\$43,205	\$54,643	\$46,923	\$48,929	\$76,250
Services - Contract Maintenance/Repairs	\$40,417	\$43,409	\$42,381	\$55,357	
Manufacturing - Printing, publishing, and recorded media	\$36,429	\$45,417	\$54,500		
Services - Education/Academia	\$35,833		\$42,500		

Note that, for the purpose of this analysis, only industries containing 5 or more respondents in 2006 were included.

Looking more generally, by industry group, we can see that the sector demonstrating the most significant salary increase in 2006 is the mining sector, with a net salary increase, year on year, of 7%. Manufacturing salaries, overall, remained essentially unchanged, while salaries in the Services sector increased by 6%, while Utilities salaries appear to have dropped by 9% - however this is unlikely to be the case, given the relatively small number of respondents from this industry sector.

Industry Group	2006	2005
Agriculture	\$40,625	\$37,500
Construction	\$53,500	\$66,667
Manufacturing	\$54,091	\$53,976
Mining	\$81,778	\$76,417
Oil and Gas	\$82,946	\$83,846
Other	\$40,333	\$48,654
Services	\$52,573	\$49,769
Trade	\$55,000	\$44,063
Utilities	\$55,337	\$60,694

Salaries by Country

Once again, only countries with 5 or more respondents were included in this analysis, which showed that the highest salaries were once again obtained in Australia, followed by Canada, Brazil (a new entrant to the table), New Zealand, and the USA.

Country	2006	2005	2004	2003	2002
Australia	\$81,792	\$85,000	\$69,886	\$52,262	\$49,750
Canada	\$68,293	\$71,250	\$59,032	\$56,000	\$52,955
Brazil	\$68,125				
New Zealand	\$63,500	\$44,167			
United States	\$60,079	\$60,241	\$62,215	\$62,880	\$61,005
Ireland	\$54,583				
Saudi Arabia	\$53,571				
United Kingdom	\$47,917	\$67,143	\$53,889	\$47,500	\$58,929
United Arab Emirates	\$47,500				
South Africa	\$43,125	\$56,071	\$41,250		\$28,000
Netherlands	\$42,813	\$49,500			
Singapore	\$37,083				
Nigeria	\$27,000				
Malaysia	\$26,875	\$31,667	\$46,000		
Indonesia	\$24,615	\$13,888	\$32,500		
India	\$21,221	\$29,808	\$28,409	\$10,000	

A weaker US Dollar appears to have led to relative declines (in US\$ terms) in salaries in most other countries. Comparisons, year on year, between countries should also be treated cautiously due to variations in exchange rates. For example, the following were the exchange rates in place at the midpoints of each of the last 5 surveys.

Currency	1 USD =				
	2006	2005	2004	2003	2002
Australia (AUD)	1.32	1.42	1.26	1.69	1.94
Canada (CAD)	1.10	1.34	1.32	1.52	1.59
Brazil (BRL)	2.31				
New Zealand (NZD)	1.56	1.42			
United Kingdom (GBP)	0.532	0.545	0.529	0.620	0.699
Saudi Arabia (SAR)	3.75	3.75	3.75		
Euro (EUR)	0.777	0.755	0.801	0.926	
UAE (AED)	3.67				
South Africa (ZAR)	6.69	6.27	6.57		11.41
Singapore (SGD)	1.58				
Nigeria (NGN)	134				
Malaysia (MYR)	3.63	3.80	3.78		
Indonesia (IDR)	9225	9208	8413		
India (INR)	46.38	45.75	45.26	47.84	

Finally, it should also be noted that tax rates will differ between countries, as will the cost of living, so a larger salary in one country does not necessarily translate to a better lifestyle.

Salaries by State

Average salaries are given for those states with more than 5 responses in the following table and chart. However, given the relatively low number of results for some states, meaningful comparison between states is almost impossible.

State	2006	2005	2004	2003	2002
Louisiana	\$78,864		\$75,500		
New York	\$75,417	\$51,500	\$59,750		
Indiana	\$75,192		\$55,227		
California	\$73,452	\$75,714	\$65,147		\$67,857
Kansas	\$70,500		\$61,500		
Illinois	\$67,955		\$55,625	\$47,500	
Maryland	\$66,500				
Texas	\$65,726	\$65,833	\$74,559	\$89,500	\$65,278
Florida	\$65,526	\$55,417	\$57,500		
New Hampshire	\$65,000				
New Jersey	\$64,000				
Pennsylvania	\$63,611	\$53,214	\$64,688		
Michigan	\$61,071		\$61,563		
North Carolina	\$59,219		\$57,500		\$54,500
Minnesota	\$58,929		\$60,000	\$54,500	
Ohio	\$58,750	\$52,955	\$62,800	\$51,786	\$58,056
Massachusetts	\$58,125		\$67,500		
Georgia	\$57,833	\$61,389	\$56,500		
Missouri	\$57,500		\$43,500		
Iowa	\$56,250				
Washington	\$56,000		\$53,929		
Wisconsin	\$55,682	\$65,357	\$73,125	\$55,500	
Oregon	\$55,357				
South Carolina	\$54,231	\$77,917	\$68,500		
Virginia	\$48,750	\$72,188			
Kentucky	\$48,750	\$51,071	\$51,389		
Oklahoma	\$48,333				
Arizona	\$47,143		\$41,500		
Tennessee	\$45,625	\$56,136	\$56,250		

Salaries by Position

As in previous analyses, only positions with more than 5 respondents were included. Not unsurprisingly, CEOs/Managing Directors get paid the most! Consulting Engineers are next highest in terms of average salaries, ahead of Management Consultants, and (surprisingly) Maintenance Crafts/Tradespeople – who appear to be being paid more than Maintenance Managers/Superintendents and Maintenance Foremen/Supervisors. Is the skills shortage at shopfloor level starting to be reflected in salaries at this level?

Maintenance Planners have again shown high salaries in this year's results, significantly more than Plant /Maintenance Engineers. Despite an apparently large increase in average salary, Maintenance Planners continue to be paid less than Maintenance Crafts/Tradespeople and Supervisors, which appears to greatly undervalue their contribution at most businesses. It is worth noting that Maintenance Planners are often well-qualified with 70% of Maintenance Planners having a Certificate/Diploma/Associate Degree or higher (12% have Masters degrees!). In comparison, 60% of Maintenance Foremen/Supervisors have a Certificate/Diploma/Associate Degree or higher.

In comparison to previous years Maintenance Crafts/Tradesperson positions have again shown the greatest proportional increase.

Position	2006	2005	2004	2003	2002
CEO/Managing Director	\$122,083				
Consulting Engineer	\$86,875	\$70,682	\$78,333		\$52,188
Management Consultant	\$64,643		\$107,143		
Maintenance Crafts/Tradesperson	\$62,905	\$57,812	\$52,400	\$56,875	\$43,542
Maintenance Manager/Superintendent	\$62,674	\$62,753	\$64,213	\$61,739	\$62,976
Maintenance Foreman/Supervisor	\$60,753	\$61,875	\$53,405	\$59,821	\$55,952
Maintenance Contract Manager	\$60,625				\$73,333
Maintenance Planner	\$58,316	\$48,542	\$56,583	\$49,412	\$39,688
Maintenance Clerk	\$53,333				
Plant/Maintenance Engineer	\$48,699	\$44,650	\$53,333	\$43,485	\$55,000
Maintenance Technician	\$42,544	\$50,500	\$46,250	\$41,705	\$43,929
Teacher/Academic	\$39,167				
Process/Industrial Engineer	\$23,750	\$53,000	\$47,500		

Salary by Education

It would be expected that increased levels of formal educational qualifications generally lead to increased salaries. Whilst this may have been inferred from previous surveys, it was not so evident in 2005, or again in 2006. If one ignores the Post Graduate (Doctorate) Degree results due to low number of respondents each year, it becomes apparent that Formal Trade Training is considered more valuable than other qualifications (apart from a Masters Degree). Caution should be exercised in analyzing these results, however. While Education on its own may not be a reliable indicator of salaries, Education combined with experience may be a more reliable indicator.

Educational Level	2006	2005	2004	2003	2002
High School	\$56,180	\$54,139	\$49,081	\$53,542	\$50,833
Formal Trade Training	\$59,704	\$58,990	\$54,384	\$47,386	\$55,093
Certificate/Diploma/Associate Degree	\$53,669	\$56,068	\$54,365	\$53,654	\$53,750
Undergraduate/College (Bachelors) degree	\$54,605	\$58,314	\$59,431	\$55,735	\$55,433
Post Graduate (Masters) degree	\$65,393	\$53,547	\$65,847	\$60,000	\$61,125
Post Graduate (Doctorate) degree	\$61,389	\$74,167	\$77,500	\$10,000	

Salary by Experience

Once again, this survey highlights that experience is an important factor in generating additional salary. For the most part, salaries increase throughout the career of Maintenance personnel.

Years Experience	2006	2005	2004	2003	2002
0 to 5	\$41,863	\$37,463	\$41,941	\$34,348	\$38,426
5 to 10	\$47,973	\$48,136	\$45,972	\$50,300	\$42,407
10 to 15	\$57,500	\$56,250	\$56,486	\$48,173	\$58,986
15 to 20	\$55,119	\$65,179	\$57,331	\$57,614	\$55,000
20 to 25	\$67,663	\$63,967	\$62,885	\$57,414	\$64,848
25 to 30	\$77,154	\$76,638	\$69,953	\$68,864	\$65,875
more than 30	\$80,833	\$74,762	\$78,030	\$65,909	\$75,625



Salary by Company Size

This year's results show that large companies pay larger salaries than medium and small companies. In comparison with the previous two years, however, where salaries for medium and large companies were not significantly different, it appears that the gap between these two groupings is starting to increase again – reflecting the results evident in earlier surveys (from 1999-2003).

Size	2006	2005	2004	2003	2002
Large	\$60,099	\$58,962	\$57,571	\$55,485	\$58,033
Medium	\$57,590	\$60,445	\$57,886	\$52,619	\$52,313
Small	\$53,302	\$51,200	\$49,476	\$47,717	\$58,534
Don't Know	\$27,778	\$50,833	\$31,500	\$52,500	\$42,500
N/A	\$46,923	\$33,229	\$63,500	\$72,500	\$47,857

Conclusion

In summary, the main conclusions from this survey are:

- The median salary for the 2006 survey was \$US 52,500 lying within the band US\$50,001-\$55,000. This represents a slight reduction from last year. Assuming the average salary for each band is the midpoint of each band, the mean salary in 2006 is US\$56,477 which is essentially unchanged from the previous two years. However the relatively static nature of the results may be due to a relative increase in the number of responses from countries with overall lower wage levels than in previous years.
- The industry paying the highest salaries in 2006 was Mining – Coal, knocking off Oil and Gas - Oil and Gas Extraction from its customary top position on this table.
- The sector demonstrating the most significant salary increase in 2006 is the mining sector, with a net salary increase, year on year, of 7%. Manufacturing salaries, overall, remained essentially unchanged, while salaries in the Services sector increased by 6%.
- The highest salaries were once again obtained in Australia, followed by Canada, Brazil (a new entrant to the table), New Zealand, and the USA. A weaker US Dollar appears to have led to relative declines (in US\$ terms) in salaries in most other countries
- CEOs/Managing Directors get paid the most, followed by Consulting Engineers and Management Consultants.
- Maintenance Crafts/Tradespeople appear to be being paid more than Maintenance Managers/Superintendents and Maintenance Foremen/Supervisors, and have shown the largest proportional increase in salaries of any group.
- Maintenance Planners continue to be paid less than Maintenance Crafts/Tradespeople and Supervisors, which appears to greatly undervalue their contribution at most businesses
- Educational level is a relatively unreliable predictor of salary, although it appears that Formal Trade Training is considered more valuable than other qualifications (apart from a Masters Degree)
- Experience is an important factor in generating additional salary, with salaries increasing significantly as experience increases.
- Large companies pay larger salaries than medium and small companies. In comparison with recent years, the gap in salaries between larger companies and small/medium companies is starting to increase.

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