Our survey says: Corporate status influences salary by £15k

IChemE’s Kate Lewis explains the 2004 Salary Survey

Chemical engineers working in the UK and the Republic of Ireland earn an average of £40,000 per year, the 2004 IChemE salary survey has revealed. Employees in the oil industry have the highest salaries, whilst the financial rewards for engineers in academia are rising at an encouraging rate. The wage gap between those with the top salaries and in most senior positions and the rest of the profession continues to widen, and an emerging trend indicates that engineers with corporate status command, on average, £15k more than non-corporate colleagues.

The average salary, taken as the median for the 4029 members who responded to the survey, is similar to the 2002 figure, showing that although the salary increase within the profession has slowed, it has kept pace with inflation. The survey, primarily carried out during the first four weeks of the year, was sent to all UK and Republic of Ireland-based IChemE members. Nearly one third of the questionnaires was returned, with the majority being submitted online. The 2004 survey was the first to seek replies electronically and this proved very popular, especially with the younger age range, which more than doubled its previous participation.

The level of responsibility achieved by a chemical engineer has the primary impact on salary. However, more surprising was the widening gap between Corporate and non-Corporate salaries – an increase of 7.5% since 2002. An engineer starting his career would expect to receive a salary in the region of £23,000 but from there the Corporate wage increases dramatically to £34,000 and by the time he reaches project manager level he can expect to earn a salary of £52,000 compared to £44,000 for a non-corporate employee. Of the 4000 survey responses (of which 58% were Corporate members and 42% non-Corporate), 48 Corporate members had risen to the position of managing director or ceo compared with only 11 non-Corporate, and the salaries received were substantially bigger. Corporate members average £76,750 ranging well into six figures, compared with the £49,000 median salary of the non-Corporate colleague.

Through natural progression of experience and promotion, a chemical engineer can expect his salary to more than double over the course of a twenty-year career. Within the age category the median salary peaks at £56,000 between the ages 45 to 55, thereafter wages decrease to £55,000 as people approach retirement. The few that choose to work on to 65 enjoy the highest median wage at £60,000.

An overall comparison of education across all age groups shows that engineers with a bachelor degree earn most, averaging £42,000 over the course of their career. Those with doctorates are next with a median wage of £41,000 and those with masters earn £36,500. It is thought the lower salary of engineers with masters degrees is influenced by their lower age and that they are more likely to work in sectors like research and development, and education, categories that show lower salary patterns.

Geographical location has a direct bearing on how much a chemical engineer can earn, and the southern part of the UK is well ahead of other regions. As expected, those working in the London area are best paid with a median salary of £52,000, well ahead of the others. Respondents from the South East and South Central areas, which have the second and third highest, earned an annual salary of £45,000 and £43,000 respectively. However, these figures will be inflated by the number of UK headquarters located in London and the majority of senior management based there.

The North West is slightly better paid (£40,000) than the North East (£38,000) but both fare better than their Scottish colleagues who earn a median salary of £36,800. Engineers working in Wales receive a moderate wage of £40,000. The Midlands are the least well-paid with only £34,200 and those in the South West fare only slightly better with an average salary of £34,800. This excludes the...
very few, only 0.6%, of chemical engineers working in Northern Ireland who receive a mere £25,500 per year. Chemical engineers based in the Republic of Ireland earn an average of £39,400, which compares well with their UK counterparts. One interesting comparison across the regions is the variation in benefit packages received. Engineers working in Greater London, are offered more professional loans despite their larger pay packets.

In terms of industrial sectors the highest pay is found within the oil sector, with a median salary of £68,000. The next highest paid sector is contracting which pays an average salary of £43,000 followed by consultants at £42,000 and chemicals at £41,000. The only sector to show any significant increase in wages since 2002 was the food and drink industry at £40,000, a rise of over 8%. An engineer in the water sector earns an average of £30,000, only 63% of the wage packet received by an engineer in the oil sector.

Graduates joining the oil (£25,800), chemical (£23,100) and process (£22,900) industries receive competitive starting salaries with pharmaceuticals (£22,000) and contracting (£21,000) keeping pace. The best-paid graduates are to be found within education, although very few, 3%, join this sector without achieving a PhD. The survey has shown that starting salaries do not accurately reflect the earning potential within each industry. The lowest paid graduates are those joining the food and drink (£15,000) and consulting (£18,500) sectors and yet these engineers go on to be paid considerably more than other areas. Graduates joining the water industry can expect a median starting salary of £19,000.

When it comes to type of work, management come top at £50,000; next come the few chemical engineers working in marketing and sales with £49,300. Academic staff continue their dramatic rise observed in 2002, by reaching third in the pay scale with £40,000. Less well paid are “other educational” a category where the salary is less than half that of the best paid category. Most disappointing is the wage for engineers working in research and development who remain the least paid at £35,000.

An encouraging sign identified by the salary survey is the steady but significant increase in women entering the chemical engineering profession. In 1996, 9.7% of the respondents was female, and of these only a handful aged 40 or over. In 2004 this number had increased to 13.6%; however, the number of female respondents over 40 years remains low. At an age of 30 and below, the salary gap between the two sexes is very small. In the next age band the gap widens and at an age of 35 and older it stays the same. From that age the female salary is about 90% of the salary for male respondents.

More than 50% of chemical engineers receive company final salary pensions, professional membership, and medical insurance benefits. The proportion reporting final salary pensions has increased by more than 10% since 2002. The other benefits options are far less spread, though only 2.9% of the respondents said they do not get any benefit at all. 26% of the respondents get the benefit of a car compared to 32% in 1996. The number reporting money purchase pension schemes has grown to 16% from 12% in 1998, which is perhaps less than could have been expected. Medical insurance has grown to 57% from 40% in 1996. On average, a chemical engineer will receive an estimated £2500 of benefits, including pension contribution, private healthcare and share options.

IChemE has carried out a salary survey of its UK and Republic of Ireland-based members every two years since 1980. To take into account developments in the profession and comments, it was fully revised in 1994. The questionnaire for the 2004 survey was posted to members in the last two weeks of 2003 and was available online via IChemE’s website, www.icheme.org. Members were asked to return completed questionnaires by 30 January. No identification was included, so the survey was anonymous. The 2004 sample compares well with earlier surveys. Some changes are noted, for example, response from the oil industry and consultants has more than doubled since 1996 and now accounts for 16% and 7% respectively. Analysis of the online replies shows that people who used this medium were, on average, younger than those who returned the paper version.

The basic measure of the survey is the median, which is the half-way point: in any chosen group 50% of the group earn more than the median, 50% earn less. The earnings distributions of any group is likely to be skew – that is, a few in the group may earn very high salaries – but is unlikely that many earn much less than the salary offered to new graduates. Because of the skew, the average or mean is likely to be higher than the median. The median therefore gives a fairer picture of what a typical member of the group is earning.

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