The nature of the construction industry, specifically in the context of Hong Kong, is inherently complex and demanding. Construction professionals are often required to work long and irregular hours within fast track construction projects, hence these factors can frequently result in stressful work environments. In recent years, the industry has faced recession due to localised economic reform and fluctuation in the property market. The Gross Domestic Product (GDP) within the construction sector dropped 35% from 2000 to 2004 (Census and Statistics Department, 2006), resulting in a considerable amount of uncertainty as far as job security is concerned. In response to this localised decline, many construction professionals have taken up new posts within the expanding economies of Macau and mainland China. However, this often involves long periods of frequent travel, away from family and home. On these bases alone, there are strong grounds to believe that construction industry professionals are likely to encounter a higher degree of work stress and related social pressure than would be generally considered the norm.

The ‘burnout’ phenomenon

Burnout is defined as a state of chronic emotional fatigue which occurs under constant and daily exposure to stress, over a prolonged periods of time (Westman and Eden, 1997). Although burnout occurs as a result of a complex interaction between individual characteristics and issues in the work environment, job characteristics are found to be more important (Yip et al., 2005). Burnout studies were originally focused on health care and educational practitioners who work continuously with people; however, after over three decades of evolution, burnout has been proven to exist also among general occupations, as long as there are role demands originating in the work environment (Maslach et al., 1996). The phenomenon of burnout and its relationship with personal and work settings have been studied extensively within many countries among differing professional groups. Consistent findings that burnout has undesirable consequential effects on both individuals and their related organisations have made this phenomenon become the focus of general interest.

Why should professionals be concerned about burnout?

Burnout contributed to by job demands has been demonstrated to directly threaten individuals’ mental and physical health (Tang et al. 2001). Common symptoms of mental disorders may include psychological distress, anxiety, depression, reduced self-esteem; whereas physical disorders may include headache, stomachache and sleep disturbance. These stress-related symptoms are claimed to be common causes for sick-leave absenteeism and an increased risk of future illnesses. In work environments, individuals suffering from job burnout are likely to be experiencing high levels of job tension and uncertainty, while at the same time, experiencing low levels of motivation and job satisfaction. They generally display a negative attitude towards work engagement and commitment within their organisations. As a result, the performance at work; in terms of productivity and effectiveness, is likely to be affected. Recent research suggests that burnout is a significant predictor of intention to change jobs (Lingard, 2003). However, employees, subject to high levels of burnout, may remain at their posts, potentially posing problems of change in their attitude and work effort, resulting in a downward trend in performance.
Why should organisations be concerned about professional burnout?

Employees are held to be one of the most valuable assets in an organisation and it often has a substantial investment in their education, professional accreditation, skills, etc. Therefore, when experienced and competent employees voluntarily leave an organisation, the business would normally have to bear the costs and the loss of capital investment, i.e. the costs of recruitment, re-training and replacing personnel. Having identified the adverse effects of burnout previously described, it may not then be surprising to learn that employee burnout contributes to negative ramifications on organisational effectiveness; in terms of tangible and non-tangible implications (Wright and Bonett, 1997). Clearly, from the organisational perspective, the fiscal results of the organisation may be adversely affected by the burnout phenomenon, either because of a general negative attitude towards work or equally as damaging those caused by changes in the behavior of individuals, resulting in high levels of absenteeism and ultimately staff turnover.

Why should the construction industry be concerned about professional burnout?

If construction professionals suffer from burnout, inferior work will be produced and mistakes may be made. A mistake in the construction industry can have a very serious effect, being costly or even fatal, or both! The financial costs; both tangible and intangible, of job burnout not only affect the organisation where the phenomenon is present but also the industry within the economy to which it contributes. Where burnout is widespread, the construction industry is therefore likely to reduce its overall efficiency; this in turn threatens the long-term competitiveness of the whole sector. The construction industry plays an important role in the overall economy of Hong Kong. In spite of the fluctuation of the property market in the recent decade, the industry still contributed an average of 4.6% to the GDP within 1995 to 2004, representing an average of HK$58 billions per year (Census and Statistic Department, 2006). It is therefore reasonable to assume that an improvement of organisational performance through mitigation or minimisation of job burnout is likely to improve the performance of the industry as a whole.

Investigation of the relevance of job burnout among construction professionals

Although construction professionals are considered to be a high-risk group exposed to burnout, there is little scientific investigation into its relevance to professionals in the construction industry; especially within the specific context of Hong Kong. This research project, funded by the Hong Kong Research Grants Council, aims at innovatively exploring the job burnout phenomenon among construction professionals in Hong Kong. This includes measuring levels of burnout; as well as identifying its contributing factors within working environments. It is also hoped that the research will draw the attention of the construction industry to this significant factor and will provide a foundation for devising intervention strategies to prevent, manage or curb burnout.

The professionals selected for study in this research were defined, according to their functions of work, having roles equivalent to architects, project managers and engineers within construction related disciplines, quantity and building surveyors, and other construction related professionals.

Invitations for participating in an online survey were distributed via e-mail to by the participating organisations and professional institutions. Construction professionals wishing to participate access a self-administrated structured questionnaire directly by going to the website address provided in the e-mail. Completed questionnaires were returned directly to the data base of the research team. Anonymity of respondents and confidentiality of responses were assured. The survey was conducted in 2005 and received 450 responses completing both sections of job characteristics and Maslach Burnout Inventory (Maslach et al., 1996).

What constitutes burnout?

The structure of burnout reported in this study was examined by Principal Factor Analysis and found to be composed of three dimensions as follows:

1. Emotional exhaustion: refers to the feelings of run out emotional resources and lack of energy (Example item: 'I feel used up at the end of the work day.')
2. Cynicism: reflects having little interest in and a distant attitude towards work (Example item: 'I have become less interested in my work since I started this job.')
3. Lack of professional efficacy: expresses individuals trend to evaluate themselves negatively and are dissatisfied with their accomplishments at work (Example negative item: 'At my work, I feel confident that I am effective at getting things done')

Levels of burnout in construction professionals

Alarmingly high burnout scores were recorded in this study. Table 1 and figure 1 below illustrated that the construction
professionals in Hong Kong scored the highest in all the three burnout dimensions when compared with the secondary school teachers in Hong Kong (Lau et al., 2005) and the law enforcement managers in Australia (Densten, 2001).

Where does burnout occur?

In this study, job characteristics which are likely to be relevant to the work demands of construction professionals were measured. A stepwise multiple regression procedure was used to test the ability of different job characteristics to predict burnout. The results are summarised in Table 2. Thus, working environments which display those characteristics shown in Table 2 are likely to expose employees to high levels of burnout.

What can we do about the burnout phenomenon?

Role overload is observed to be a significant predictor for all three dimensions of burnout. This may be explained, to a large extent, by fast track construction practices which are a well-known characteristic of the Hong Kong construction industry. However, the conditions associated with this type of project may not be within the control of construction organisations alone. The industry, as a whole, may need to review existing construction practices, aiming to effectively reduce the undesirable implications of professional burnout and its related, often hidden costs, which may prove to be higher than anticipated in the long term. Resources are always limited; therefore the negative effects of burnout cannot easily be managed without a fundamental change in job role and responsibility design. Such job redesign should address also the aspects of resource inadequacy, role conflict and role ambiguity highlighted in this study.

Table 1: Cross-occupation Comparisons of Burnout Scores

<table>
<thead>
<tr>
<th>Burnout Dimensions</th>
<th>Construction Professionals (N=450) Mean (SD)</th>
<th>Secondary School Teachers (N=1,797) Mean (SD)</th>
<th>Law Enforcement Managers (N=480) Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Exhaustion</td>
<td>3.09 (SD=1.40)</td>
<td>2.49 (SD=1.67)</td>
<td>2.54 (SD=1.67)</td>
</tr>
<tr>
<td>Cynicism</td>
<td>2.62 (SD=1.23)</td>
<td>1.31 (SD=1.09)</td>
<td>2.11 (SD=1.48)</td>
</tr>
<tr>
<td>Lack of Professional Efficacy</td>
<td>1.88 (SD=1.06)</td>
<td>1.84 (SD=1.03)</td>
<td>1.37 (SD=1.21)</td>
</tr>
</tbody>
</table>

Legends: N=Sample size; SD=Standard deviation
Note: The items of the three burnout dimensions were scored on a seven-point rating scale (0=never, 6=always); i.e. maximum score is 6.

Table 2: Job Characteristics as Predictors of Burnout

<table>
<thead>
<tr>
<th>Job characteristics</th>
<th>Burnout Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Emotional Exhaustion</td>
</tr>
<tr>
<td>Role overload</td>
<td>✔</td>
</tr>
<tr>
<td>Resource inadequacy</td>
<td>✔</td>
</tr>
<tr>
<td>Control over work pace</td>
<td>✔</td>
</tr>
<tr>
<td>Satisfaction with pay</td>
<td>✔</td>
</tr>
<tr>
<td>Role conflict</td>
<td>✔</td>
</tr>
<tr>
<td>Organisation care</td>
<td></td>
</tr>
<tr>
<td>Perceptions of performance appraisal</td>
<td>✔</td>
</tr>
<tr>
<td>Role ambiguity</td>
<td></td>
</tr>
</tbody>
</table>

Legend: ✔ = a significant predictor of a particular dimension of burnout.
The empirical evidence contained in this study make a significant contribution towards a better understanding and awareness of the burnout phenomenon among construction professionals in Hong Kong. More importantly, it may also offer the provision and foundation of a knowledge base for the design of organisational intervention strategies to effectively mitigate and/or minimise burnout together with its negative effects.

References
Census and Statistic Department (2006), Hong Kong Special Administrative Region, China.